

AMERICAN VETERINARY REVIEW.

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EDITORIAL.

THE TWENTY-FOURTH VOLUME.

The conditions under which the April number of the REVIEW goes forth to its subscribers are unique in its history. No subscriber will receive a copy of it who has not paid for it in advance. The reasons for this innovation on the part of the publishers was fully explained in the February and March issues; a repetition is here unnecessary. Suffice it that they were forced to adopt this rule by those who cared little for their obligations and received the benefits of the exertions of others silently and selfishly. We are, therefore, addressing for the first time a list of only such readers as appreciate the journal for the good it is endeavoring to accomplish, and who wish to help along veterinary medicine, while receiving the benefits of such a medium. Almost every one of them, in renewing their subscriptions, applauded the course taken by us, and assured us of their hearty support and sympathy. All of this is very grateful and encouraging, and gives us heart to pursue our self-imposed task for what benefits may flow to our beloved science of veterinary and comparative medicine. And now that the subject has been renewed we feel an obligation to state plainly to this devoted constituency that at the time this issue goes to press, we regret to say that many have not qualified to receive a copy of it. Perhaps when the REVIEW fails to make its accustomed monthly visit they will recant, and again find their way to the family fireside; we

sincerely hope so, at least. We have left, however, a very respectable mailing list with which to begin Volume XXIV; but in order that the REVIEW may not halt in its forward march this list must be materially increased. We shall do our utmost to accomplish this by publishing a journal full of useful and interesting scientific material upon every phase of professional advancement, reflecting the pulse of veterinary progress with accuracy, guarding its interests and sounding the alarm when its welfare is endangered by internal or external circumstances. Our colleagues of the profession, who by recording their thoughts and experiences are the real makers of the journal—must unite to assist in this work of restoring the lists to their former proportions, expunged as they are of all unhealthy material, and rendered aseptic by the cleansing influences of the blue pencil. Each one should feel that it rests with him to secure at least one other fellow-veterinarian as a subscriber, knowing by his own experience that he will be doing his brother a real service, and elevating the whole profession by assisting in the upbuilding of the bulwark of progress—veterinary journalism. We shall be only too glad to welcome back any of those who forced themselves out by their voluntary action, and will guarantee them a brighter journal for the coming year than they ever had in the past.

EUROPEAN CHRONICLES.

SPIDERS' WEBS.—We all know what wonderful hæmostatic properties have for years been granted to spiders' webs—to those little networks, delicate but of doubtful clean appearance, and probably many of us have resorted to them to arrest hæmorrhage. Their value has been sanctioned by practice and endorsed by writers; they have for a long time been patronized by even high surgical authorities. In a recent publication, however, made at the Société Centrale of Paris, an alarm was raised against their use: they are hæmostatic, but can also be the carriers of infectious germs. Mr. Pecus had been asked to prescribe for a horse which had received several wounds; he

ordered cresyl solution and bandaging; the hæmorrhage had been arrested by the application of spiders' web. Four days later the horse was affected with a confirmed horse-pox. The spiders' web used against the hæmorrhage of the wounds came from a barn, in which cows were kept, and the cows had had cow-pox. The vaccinaceous dust held by the webs had been transported to the wounds of the horse. The contagion was evident. Nocard in relation to this contagion states that while he is not certain of it, the fact is possible, and deserved registering, but he opposed the use of spider web as an hæmostatic. Cases of tetanus of undoubted origin, by their use, have been recorded. In fact, the same can be said of many similar old remedies, such as the use of clay on the end of a ruptured umbilical cord, or of scrapings of raw potatoes on burns, or of cow manure in traumatism of the feet. It is the duty of veterinarians to educate the people, and guard them against the use of those remedies which, "if they do no good, may and often do great harm."

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ARMY VETERINARIANS.—The general reorganization of the army veterinarians is occupying the attention of the French Government, and legislation has been detained so long that I have been prevented from giving our *confrère*, Dr. Huidekoper, the information that he has asked of me to present to the Committee on Army Legislation of the American Veterinary Medical Association. But I have succeeded in obtaining the communication of a ministerial order which is not without interest. It refers to veterinarian candidates for the army.

When a graduate from a French veterinary school desires to enter the army, he has to go for a certain length of time to the military school of Saumur, where he follows a special military veterinary course. It is to this that the ministerial circular refers.

This curriculum consists in: (1) Exercises on the writing of reports, situations, proceedings, etc., to both professional and military points of view; (2) Thorough study of military veteri-

nary hygiene while in station, on the road, in campaign, on railroads and on board vessels ; (3) Special and practical study of feed ; (4) Special course of military sanitary medicine ; (5) Course of military horseshoeing ; and, besides these, a special course of meat inspection on the diseases which prevail in large camps and the measures they require. Micrography, foreign languages and equitation complete the curriculum.

There is no doubt that after this, and only after this, the veterinarian is well prepared for his special work.

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EMPIRICISM IN EUROPE.—The science of veterinary medicine has made considerable progress for the last few years all over the world. The education given in the veterinary schools is now equal to that obtained in medical universities. The facilities offered to students, the thorough condition of the curriculum, the requirements demanded of all candidates before entering the schools and at the time of graduation, all are evidences of the importance that the profession has reached, not only in public estimation, but also in the eyes of the various governments. And perhaps the progress made in the United States is greater than in any other country except possibly England. In the United States, although the profession is yet only in its infancy, the practice of veterinary medicine is not allowed in many of the States except by regular graduates of an institution in good standing. In England the restrictions are still greater, as the essential requirements to permit one to practice are an English diploma, the one delivered by the Royal College of Veterinary Surgeons. England does not recognize any other degree, while the United States and some countries of Europe with them, we believe, are willing to recognize a foreign diploma, under some special requirements.

It is evident that the object thus reënforced by England and the United States is to kill empiricism, and it is no less evident that success is the result. In the presence of such, is it not surprising that Central Europe should remain so long without enacting laws to protect her veterinarians, and that they should

permit not only empiricism to flourish, but even let it be encouraged by members of the profession, as the case was recently reported in the *Berliner Thierärztliche Wochenschrift*, where a German veterinarian advertises a special course of obstetrics, practical, on *mannequins* and on living animals, for any one, with instructions in diagnosis, difficult labors, diseases, etc. After this, it seems that veterinarians in Europe have little reason to complain of empiricism.

A. L.

FRENCH VETERINARY CONGRESS OF PARIS.

This congress will be held at Paris, Sept. 7, 8, 9, 10 and 11, 1900, at the same time as the international equine exhibition. The questions of the Congress will include discussions on such important topics as the inspection of meats from every point of view; the breeding of horses; the organization of a veterinary sanitary service; agricultural instruction by veterinarians, etc.

Foreign veterinarians are invited to send their adhesions and to take part in the discussions. The assessment (ten francs or two dollars) can be addressed to the office of the REVIEW. All adherents will receive the reports and minutes of the sessions of the Congress.

A. L.

THE HORSE IN MODERN WARFARE.

The acute interest which our profession is taking at present in army matters must be intensified by the astonishing results which the horse has brought about in modern warfare. While the experience of our Civil War had taught us that the early victories of the Confederates were due to the mobility of their mounted troops, and that again the magnificent finish of this long and tedious campaign was the result of the finally organized cavalry brigades under Sheridan; while the short but brilliant war between Prussia and Austria in 1866 was won in six weeks by the energy and endurance of the Prussian cavalry, and while in the Franco-German War of 1870 the German cavalry was seen reconnoitring everywhere, but always on hand to decide severe and often doubtful battles; yet, notwithstand-

ing all this recent evidence in favor of the horse, false prophets were not wanting in our time to tell us that cavalry would be no longer a factor in future wars by reason of the modern long-range rifle and the quick-firing gun.

The actual experience has proven the reverse to be true. Both in the South African war and in our campaign in the Philippines nothing has been accomplished without the horse. If we recall the events in Natal we have seen that the Boer horsemen were driving before them the English infantry, quickly surrounding them and securely locking them up in beleaguered cities. The relief expeditions also were failures as long as the Boers were in force. All this was the result of the mobility of the Boer on his horse. It is as a war correspondent rather graphically describes: "We never see the Boers; they fight on their bellies and seem to be as ignorant of the use of legs as a boiled egg. If pressed hard they will mount their fleet horses and disappear and reappear without being more than accidentally hit. It is a case of the moving target. They follow our flanking movements as quickly as we can execute them," etc.

But this scene was changed as soon as Lord Roberts moved forward with his cavalry and horse artillery invading the Free State. The small Boer horse was not the equal of the big and enduring English cavalry mounts, and the Boers were not allowed to stop and to concentrate. Late reports also say that the Boer horses are giving out fast from insufficient food and disease, while the English mounts remain so far in good and healthy condition, thanks to the intelligent care of our English army colleagues. Veterinary Major Huntington reports that he has effectually prevented the spread of the dreaded "Natal horse sickness" by applying medicated nosebags to the horses at night, thereby preventing them from coming in contact with the dew of the grass which evidently harbors the germs of this disease.

Similar is the work of the cavalry in the Philippines. Before the advent of the American horse our people had become impatient about the slow progress of our army. Young's cav-

alry has changed all this in short order. Seven provinces were delivered out of the enemy's hands into ours in less than as many weeks by forced marches over slippery rice fields and constant skirmishes, and now only small cavalry patrols are going back and forth over the principal roads, bringing in a few stray men with rifles every day. About our horse a correspondent says: "Our big American horses are the dragon of the little Filipino's dream. At the sight of the galloping, yelling cavalymen they never wait to fire a shot."

A fact which interests us greatly is the rapidity with which our horses become acclimated in the Philippines, and the ease with which they adapt themselves to an entirely new diet. They are said to relish the soft, succulent grass, and have quickly taken to eat rice and rice straw. A veterinarian writes us that if a seasoned horse is offered both oats and rice, he will prefer the latter, and he calculates that this will greatly reduce the expense to the government of keeping horses in the Philippines. All this, too, is against the prediction of some experts who were finding the horse an unclean and fragile creature and who were longing for the day of the bicycle and the automobile in warfare.

To sum up: The horse has once more demonstrated his adaptability to changed conditions of war, and is winning new laurels in bringing victory to his side by his good will, fleetness and endurance, as he has done in the past for hundreds of years. No doubt the War Department will quickly recognize these facts and prepare for future emergencies by developing the mounted service in giving to it still better horses, good horsemen as soldiers, keen officers as leaders, and well equipped veterinarians as guardians of the health of the horse. O. S.

VETERINARY SURGEONS FOR THE ARTILLERY.

The bill before Congress re-organizing the artillery contains the following section: "Sec. 10. That the Secretary of War is authorized to appoint for duty with the field artillery, under regulations governing similar appointments in the cavalry arm

of the service, two veterinary surgeons of the first-class and two of the second-class, and that said veterinary surgeons shall have the pay and allowances of veterinary surgeons of cavalry of corresponding classes." This is the first time an attempt has ever been made to provide the artillery with veterinarians. We hope the bill will pass.

ORIGINAL ARTICLES.

THE FUTURE OF THE VETERINARY PROFESSION.

BY W. L. WILLIAMS, V. S., CORNELL UNIVERSITY.

Read at Alumni meeting, School of Comparative Medicine of McGill University, Boston, Mass., Feb. 17, 1900.

I would define a profession as a branch of higher learning constituting an integral part of civilization and necessary to human welfare.

In outlining the future of our profession we must base it upon our past history and present condition, considering the forces at work, the obstacles in the path, and the progress thus far attained.

Functions now properly devolving upon our profession have been deemed essential to human welfare since the earliest dawn of history. More than 3000 years ago the Jews were interdicted by the Mosaic laws from using meat from animals which had died from disease.

In recent years we have come to see the importance of this law, through bacteriology and pathology, which have demonstrated the close relationship or identity of numerous diseases of animals and man, and have fully shown the importance of wholesome meat and dairy products.

The Mosaic law was tribal, and the animals killed were of their own flocks, for their own tribe, and the killing was supervised by one of their own number specially trained for the work.

While the population in our country remained largely rural, so that each family produced its own meat supply or procured

it from an acquaintance, its wholesome character could be readily determined. When animals for slaughter were driven on foot from country to city they were freely open to observation.

With the growth of cities and specialization of industries in rural districts meat and dairy products were largely procured in distant parts of the country from unknown producers and transported rapidly in stock or refrigerator cars in a manner tending to cover both source and character, conditions highly conducive to fraud. Almost any practitioner in a meat-producing or dairying district can recall the disappearance of fatally diseased animals, which have evidently gone clandestinely to city or village market for human food. The Mosaic law (Deut. XIV. 21) interdicted the use of diseased meat by the Jews but permitted them to sell it to strangers or aliens. Our national meat inspection protects the alien and the stranger in a foreign state, and confines the use of diseased meats to the localities or communities producing them. Under our form of government the nation ceases its control at inter-state and inter-national food traffic and leaves each state or municipality to control its own food supply.

Modern advances in our knowledge of disease has engraved upon the mind of civilized man as deeply and indelibly as the law of Moses upon the tables of stone the necessity for care in the selection of meat and milk for human food. The laws of health are as divine to-day as when Moses received them on Mt. Sinai.

The future of our profession in relation to meat and milk inspection is as plain as it is inevitable. The national inspection will be increased and strengthened, and states and municipalities will be compelled to introduce systematic inspection in harmony with the needs of a civilized people.

Early in history efforts were made to learn the nature and stay the devastation of serious animal plagues which so often brought commercial ruin and loss of meat supply to and imperilled the health of individuals and communities and embarrassed the finances of nations. They rarely commit such appal-

ling ruin now. The lung plague of cattle has been blotted out in America, Texas fever has been hemmed in and is being vigorously attacked in its indigenous soil, hog cholera is being hampered, new means for handling glanders and tuberculosis have been learned, and everywhere animal plagues are being controlled, ameliorated or eradicated. In the light of the progress made and obstacles overcome it is needless to say that its development must continue, that only the most superficial tasks have been accomplished, that other problems of equal concern must be solved, which will require more men, time, energy and ability than that already done.

The rude, gross work already done has merely served to uncover deeper, more complex questions.

For some years there has been much anxiety and interest in the future of our army veterinary service. With an abundance of cheap horses and very small number used for army purposes, the subject has not deeply impressed our War Department, and has led to occasional outbursts of impatience, but slowly the question is being worked out. The first apparent need for army veterinarians was during the Civil War, when we had no educated veterinarians, and non-graduates were employed to do the best they knew, some of whom were afterward continued as veterinarians to cavalry, being civilian employes responsible to the government, but the government not responsible to them.

Next graduates were employed on the same terms, then graduates only were employed, and finally graduate veterinarians must pass a civil service examination, but otherwise the old conditions exist, there being no rank and no material power, and hence no powerful appeal to the highest type of veterinarians, though there are always plenty of applicants for each vacancy.

I am an applicant for a position in the army veterinary service, having filed my application, endorsed by the worthy dean of our alma mater, and other eminent veterinarians more than 20 years ago, but there seems to be so many candidates that I have not yet received notice of an appointment.

The most serious obstacle to a better army veterinary service is the army veterinarians.

Instead of entering into a careful study of how to improve the service of animals in the army and publishing their results in either the army or veterinary periodicals, they have largely assumed the prerogatives of the army mule and expended their energy in "kicking" about their low pay and absence of rank. The needs for competent veterinary service in the army are constantly growing, and the status of the army veterinarian is advancing little if any slower than other branches of the profession. A competent service can only be attained by granting proper rank and pay and this will be done as soon as the war authorities realize the necessity and know where to secure the men.

We have also to deal with an element in our profession which many speakers and writers tend to keep in the background, as being less popular and fashionable, perhaps, because its votaries doctor ordinary horses, cows and dogs, and are at times dubbed ordinary horse, cow or dog doctors. Our journals exalt the official veterinarian and his achievements, associations discuss sanitary problems at greatest length, legislators appropriate moneys for the furtherance of veterinary sanitary science and college professors seem at times to almost advise their highest graduates to not sacrifice their talents on common practice. The self-educated or uneducated veterinarian is passing and several states are decently burying him by repressive laws for which there is now scant need.

They could not at once be replaced by well educated veterinarians, but chiefly by graduates of veterinary schools which could grant diplomas on short notice, easy terms and at prices within the reach of all. The lower of these dovetailed nicely into the upper ranks of the others with only a sheet of thin parchment paper between the two.

The late boom in horse breeding increased correspondingly the output of inferior veterinarians. The collapse of the boom caused many of them to feel that *their* profession was passing. They had fulfilled their mission, why not pass?

Electricity has mercifully swept out of existence the street-car horse and his attending veterinarian. Other inferior classes of horses are threatened by mechanical devices.

Intelligence, close companionship, beauty of form and grace of motion, attainable only in living beings, guarantees a permanent place for the horse, and the passing of the lower types only enhances the value of those retained, so that the intelligent, competent horse, in field or on road, in the carriage or under the saddle, in peace or war, is as highly prized to-day in affection or gold as the Bucephalus of Alexander the Great or the chariot horses of the Olympian gods.

The permanency and increasing value of our other domestic animals is not questioned. The sanitarian treats his problems *en masse*, the general practitioner his patients in detail.

If the sanitarian saves 10 animals with one gross act and the practitioner 10 animals by 10 separate acts, each has rendered the same service and should have the same applause.

It is questionable if the deaths among dairy cows from tuberculosis greatly exceed those from parturient apoplexy. The monetary losses from spavin, ringbone and navicular disease combined, probably exceed those from any one contagious disease of horses. More persons are annually maimed or killed by vicious horses which could be rendered docile and safe by surgical interference than die from glanders, anthrax and rabies combined, yet the control of the contagious is very properly applauded, while the amelioration of the vices go unnoted, is almost untaught and in practice rarely applied.

In questions of breeding, selection, handling, feeding and stabling the veterinarian properly trained is capable of giving advice of inestimable value.

But the general practitioner is a sanitarian of no mean degree. A human life is worth the same whether threatened by a vicious or glandered horse.

The practitioner largely discovers and reports contagious diseases, sometimes without thanks from the sanitarian and with execrations from the owner.

General practice is the body, the foundation of veterinary science; sanitary medicine, meat inspection and others are branches.

The present status as pictured by some reminds me of the willow and the oak. Take a willow twig and stick one end of it in the sward—no matter which end—and it begins at once to grow, sends out forks just at or under the mud, each fork apparently trying to outgrow the other, each leaning away from every other in order to get more sunshine and appear more important than the other.

The oak starts from the acorn, grows a root first, then a trunk, and when of sufficient stature and strength sends out branches in noble symmetry and grandeur. Each is a tree, the oak by merit; the willow on a technicality. The oak is worth more a century after death than the willow in its prime. It seems inevitable to me that the future will demand and have a broadly educated, refined, enthusiastic body of general practitioners, with a substantial and ample preparatory education followed by thorough general veterinary training, a trunk, a body of solidarity, and then, after appropriate maturity and attainment of due self-respect, owing to special proficiencies or experience, certain individuals will be called out to constitute branches, spreading out broadly in perfect harmony, not antagonistic, each mutually helpful to the other, and supported by a competent, compact trunk.

Inseparably linked with the destiny of our profession stand the veterinary schools. A study of these only adds clearness and hope to what we have stated. The first schools were merely those required by the country, teaching a moderate amount of the veterinary knowledge of the time. They were private institutions, to a greater or lesser degree commercial in aim, doing their pioneer work well and rendering greater achievements possible.

Naturally they grew old and momentous changes followed rapidly. An affiliation was made by some veterinary schools with universities, a sort of quasi recognition of veterinary science as a branch of higher learning.

The universities finding that this loose union brought no serious disasters upon them, their next step was to officially and definitely recognize our science as a profession in the sense in which we have defined it, and created or adopted existing veterinary schools as colleges, and made them a living, vital part of their organization. Our alma mater was among the earliest, with the veterinary departments of Harvard and University of Pennsylvania, followed later by Cornell and New York.

More material recognition followed or even preceded. Our alma mater received financial encouragement from the Province of Quebec before becoming amalgamated with McGill University. Pennsylvania was aided by the state and through the liberality of friends and other colleges received material aid. If anything, perhaps still more praiseworthy aid to veterinary education was at times extended by the proprietors of private colleges by giving freely from moneys earned in other ways to the support of their cherished institutions, and giving, still more, their time and work, from which no financial reward could be logically expected.

The States of Iowa and Ohio early recognized the veterinary profession by organizing in connection with their state educational institutions veterinary colleges, and even these had been anticipated by Cornell University, which had granted a limited number of veterinary degrees and had recognized the dignity of the profession by placing one of her veterinary graduates upon the board of trustees.

Finally, the State of New York recognized more broadly than all predecessors the dignity and value of our profession by founding, equipping and maintaining at Cornell University a veterinary college, free to residents of the State of New York.

Veterinary education has passed forever from the realm of commercialism and cannot now be conducted in harmony with the needs of civilization except by the philanthropy of men of wealth or through state support.

The laboratory is replacing the lecture room : some other than

the veterinary student must pay for the enormous increase in cost.

The new veterinary education is naturally looked upon unfavorably by the old. State and endowed institutions maintain faculties numerically less than the earlier type, pay more for their services, and expect more or all of their time and energy. The commercial institutions criticise the brief list of their teachers, and for their own colleges advertise an extended faculty list, practically unpaid, the professorships at times probably selling at a premium, the work being light and the advertising medium appearing to them good.

Some years since a trustworthy graduate of a college having one of the largest faculty lists, when asked incidentally regarding a certain professor of a major subject, assured me he did not know him, and that during his two years' regular attendance he had not seen nor heard of him, though during that time, to my knowledge, his place of business was but a few minutes' walk from the college. Another important teacher and officer of the institution, at near the same time, required a three-days' journey by fast express to reach the lecture-room and regularly spent his evenings at home with his family. Aside from advertising, it requires a greater number of such men than their total faculty list to equal one man of ability present and at work. The demand and requirement is for teachers at living wages whose whole time, energy, mind and soul is dedicated to his one work. More than that, the veterinary teacher of the future must be a student among students, a thorough investigator, a contributor to veterinary knowledge.

All investigators of veterinary subjects are valuable teachers, whether holding the title of professor in a college or not, and all holding professorships in veterinary colleges who are not students of and contributors to veterinary knowledge are frauds, and schools based upon a faculty consisting of such men are frauds of the vilest kind. In the future the value of a college faculty must be based upon the quality and quantity of teaching done supported by original research and contributions to our store of veterinary knowledge.

Another inevitable change in the near future is better college buildings and equipments.

A college professor recently wrote about a "livery stable" appearance in the front of some of our veterinary colleges.

Exploration of some of them from front to rear and basement to roof only emphasizes the comparison in arrangement, care and odor. So when graduates take offices in badly kept livery stables does it not make him feel as though he still saw and smelt his alma mater?

Several of our colleges have very creditable buildings conveniently located in reference to clinical resources, but most of these have no grounds beyond the walls of the building.

Notable exceptions to this rule are shown by the University of Pennsylvania and Cornell.

The former has tasteful and spacious buildings with ample grounds, in direct connection with the other parts of the university, while the college at Cornell enjoys as tasteful and commodious buildings, in as commanding a position as almost any of the great buildings on that highly picturesque campus.

The "livery-stable" veterinary college is passing, the union between the colleges and great universities is growing in closeness and solidity, veterinary professors are rendering like services with the same skill and devotion, they sit in the same university faculty, receive the same pay, move in the same university society as other college professors. We shall soon see generally, as has already been seen at Cornell, our profession recognized by veterinarians upon university boards of trustees.

A self-respecting university cannot long maintain a college whose graduates she cannot accept as educated gentlemen fit for association with other alumni, neither can the university suffer one of its colleges to remain long in a livery stable.

If one knows the colleges which educate the members of a profession he knows the profession.

The most hopeful sign to-day of the future of our profession is that those colleges requiring the highest entrance examinations and the longest courses of study with faculties rendering

the greatest amount of service each, supported by the best buildings and equipments, are, whether viewed from the standpoint of increased percentage of students in attendance or of original published investigations by their faculties, the most prosperous and vigorous, while the shorter the course, the less work done by each member of the faculty, the more livery-stable like the surroundings, the poorer the showing in attendance in comparison with the past.

Future veterinary education, reflecting the future of our profession, will be more intensely a part of our university system, the graduates possessing high attainments, a general education in all parts of veterinary science coming first, the general practitioner immeasurably better prepared in surgery, obstetrics, medicine and other essential subjects, and from this well trained body can be drawn all specialists of a high order which exigency may demand.

In great cities, in connection with veterinary colleges, great animal hospitals will grow up, equal to those for man, where animals may receive equally scientific handling with like results, where valuable studies will be made for the welfare of domestic animals, for the economic interests of their owners and the nation, and where valuable lessons will be learned applicable to the diseases of man. These will not be built as commercial enterprises, but will be erected by philanthropists or states for the benefit of civilization. Their coming is the logical progress of events. We cannot say where or when, probably within one decade, surely in less than two, it may be here or there, but whether such structure rears its columns at McGill or elsewhere, of one thing we may even now feel assured, our *alma mater* will have played no mean part in building the foundation.

DR. WM. HERBERT LOWE, Treasurer of the A. V. M. A., has been added to the list of collaborators of the REVIEW for Volume XXIV. As the doctor is never a figure-head in anything with which his name is associated, our readers may expect something from his pen from time to time.

THE THERAPEUTIC ACTION OF PHENACETIN IN FEBRILE DISEASES OF THE HORSE.

BY W. T. CAMPBELL, V. S., CINCINNATI, OHIO.

Having had considerable success by the use of phenacetin in febrile diseases, I thought an article on the same would not go amiss.

Phenacetin is an odorless, colorless and tasteless powder, soluble in alcohol and sparingly soluble in water, having all the antiseptic and analgesic properties of acetanilid but not the depressing effect. Its action is slower and more lasting and is never collective. It lowers temperature and decreases pain. It may be given in doses five times as large and is less liable to produce collapse than any other antipyretic.

From personal experience I find that drachm doses every three hours decrease abnormal temperature about one degree a day in most cases.

It is a great diaphoretic, and never leaves any bad effects. I have used it in almost all kinds of fevers, and have never found it out of place, and have found it to be a specific in influenza, pulmonary diseases, laminitis, gastritis and enteritis. In the above diseases I find it superior to perfect a sure and hasty cure. To show some of its actions I will give the history of some of the cases I have used it in from my call-book.

Case I.—A sorrel horse, belonging to Mrs. G., with pleuropneumonia, was brought to hospital on April 10th. He had been stabled all winter and had made his first trip against a cold rain, and when he arrived at hospital he was hardly able to walk. Great drops of sweat bedewed the body. Temperature 104° , heaving flanks, limbs outstretched, head depressed, ears and limbs cold and pulse fast and weak, with crepitant sound on auscultation. I at once ordered hot fomentations, blankets and pure air, a laxative of oil, terebinth and ammonia, and phenacetin in drachm doses every hour. On the following day I gave this every two hours, then every three, and

so on until I was giving it three times a day, which was continued for five days, and on the 25th of April he was able to go to work.

Case II.—A grey mare, with azoturia, following œstrum season, had a very severe fever, and was down. After placing her in slings, removing the contents of the bowels and bladder with enæmas and catheter, I gave her powders containing one drachm each of phenacetin, iodide of potassium and salophen. This treatment was continued for ten days, when she was well enough to work.

Case III.—A roan horse, belonging to liveryman, was taken sick about noon, and was given up by one veterinarian, and I was called about 5 P. M. He was down and in considerable pain, but not rolling. The heat could be felt rising from the body and animal was wet from head to tail with perspiration. I ordered body and legs rubbed with sweet oil and oil of mustard and covered with blankets wrung out of hot water and gave him powders of two drachms each of phenacetin, caffeine and salophen every two hours. Next day reduced it to one drachm and then reduced the frequency as above case until sixth day; then gave phenacetin in drachm doses three times a day, and in two weeks was able to work.

Its sure and steady action makes it valuable in pulmonary diseases; while it does not interfere with medicines given to act on the bowels. It is one of the best febricides and it gives us a chance to keep the bowels in the best condition to suit our case. In scarlatina and epizoötic cellulitis it has a specific action, it being also an anodyne as well as an antipyretic.

This also makes it a great remedy for diarrhœa and inflammatory and painful diseases. It relieves pain and gives nature a chance to assist.

To sum it up, I find it the best antiseptic, analgesic, anodyne and antineuralgic in the pharmacopœia for any or all febrile diseases. If any of my fellow veterinarians have found it any other way I would be glad to hear from them or their success would be as welcome.

SERUM TREATMENT OF INFECTIOUS PNEUMONIA.

BY T. B. ROGERS, D. V. S., WOODBURY, N. J.

Lately the writer has treated seven cases of infectious pneumonia with the anti-pneumococcic serum. The results warrant him in laying the matter before the profession.

In a stable of five heavy draught horses one of them developed this disease. It ran a typical course; almost complete consolidation of one lung, with temperature running between 105° to 106° F. for nearly a week, the patient then passing into a tardy though uncomplicated convalescence. He was treated in the routine manner by antipyretics (acetanilid), aconite, then strychnia and whiskey.

The next case ran three days with a like elevation and under like treatment. He then received 25 c.c. of the pneumonia antitoxin. The next day his temperature was 101° F., and it remained there. The lung consolidation disappeared quickly and the convalescence was hastened.

The third case when first seen had a temperature of nearly 106° with some pleuritis, moving with difficulty and evincing much pain on motion. He received 25 c.c. of anti-pneumococcic serum at 4 P. M. At the same hour next day he was much better, stiffness and pain disappearing, pulse more compressible and respiration eased. He was given a second dose of 25 c.c., and in twenty-four hours his temperature dropped to 100 $\frac{1}{2}$, the other symptoms being in like degree ameliorated. He got well and returned to work very quickly.

In the other cases the recoveries were equally rapid and uneventful. I may add that all received in addition to the antitoxin a drachm of acetanilid, with sufficient aconite to keep the pulse soft, three times daily, this being followed as the condition changed by one-quarter grain doses of strychnia *pro re nata*, and half teacup of sound whiskey in each pail of water. I may add that only one of the second series got more than one dose of the serum. In each case the serum was quickly absorbed; in twenty-four hours there was absolutely no infectious oedema.

Now, one swallow doesn't make a summer, but I think

most of us must admit that the results were somewhat remarkable; at the same time we must not forget that to get good results the disease must be bacterial. The makers (the H. K. Mulford Company, of Philadelphia, Pa.) are very modest about it, claiming only that it is a bactericide, not an antitoxin proper, and one of their professional employes seems to be under the impression that pneumonia due to physical causes (traumatic pneumonia, using the term in a wide sense) is common, and that no benefit could of course be expected in this class of cases.

I am, however, of opinion that the diplococcus complicates most of these cases, and that the serum should be used in the hope that it would at least prevent secondary invasions of lung tissue and so protect the patients.

An interesting part of this experience is the prompt reduction of temperature, and if the serum will do no more than this and it turns out that its extended use is as absolutely harmless as in this series of cases, it will make a very valuable addition to our materia medica, for we are much in need of an absolute and safe antipyretic. The ideal drug of this class is of course *one that will diminish heat production and at the same time leave no depressive action on the heart or deleterious after effects on the tissues.* What we have to be content with at present is found in drugs of the coal-tar series—as antipyrine or acetanilid. These, of course, not only decrease production by their influence on the heat centres, but also increase heat dissipation, the latter function being decidedly at the expense of the organism; and while this is a step in advance of the heat dissipation pure and simple, with which our ancestors had to be content, still a step further to an ideal heat diminution is devoutly to be wished. I do not say this serum covers this ground, but it has carried these cases through for me quickly, safely, and pleasantly, and I shall use it again.

My thanks are due to Mr. Milton Campbell, the president of the H. K. Mulford Co., for his kindness in supplying me with serum and for the very "professional" attitude he assumed in the premises, making it in no sense a business or advertising matter.

POST-MORTEM INSPECTION OF SWINE.

BY W. E. HOWE, V. S., ASSISTANT MEAT INSPECTOR, CHICAGO, ILL.

Read before Chicago Veterinary Society.

In dealing with this subject of meat inspection, perhaps it will be well for the benefit of those present who have not witnessed the killing of hogs on a large scale to give a little idea of how the work is accomplished.

The inspector is on the bench with the workmen who remove the viscera from the carcass. The hogs are hung on an iron rail by means of a pulley which has a double hook to catch the gambol stick. They are then moved along the rail by means of an endless chain, running parallel to the rail, which has fingers projecting to catch behind the pulley and move it along, so the hog is in constant motion. The inspector is provided with a seat, usually at the end of the bench, and so situated that the hogs pass on review so closely that the inspector can touch them without rising from his seat. The viscera is dropped on the bench beside him, where he has a good view of it. Thus the hogs pass, in different houses, at a rate of from two to seven hundred an hour. The inspector keeps watch and any carcass that shows evidence of disease is tagged. The viscera is also tagged and saved, the two tags bearing duplicate numbers, so that the viscera that belongs to any hog in question can be readily found. The diseased carcasses are run into a separate place from the others, so that they can be examined closely after the day's work is finished. Then they are disposed of as the case demands, either put into the offal tank or released. In this paper time will not permit me to cover all the diseased conditions with which we come into contact, so will only touch upon a few. But, first, what good reasons have we for condemning any of these diseased conditions which we find?

First.—For sentimental reasons.

Second.—There is a sufficient amount of good meat in this country that can be obtained at reasonable figures, so we do not need to eat any but what is free from disease.

Third.—For the effects it would produce upon the one consuming the meat.

As many of the diseases with which we come into contact most frequently are of bacterial origin, it brings up the question of how do bacteria produce disease? Many theories have been brought forward, at different times, but the theory which now is generally accepted is that symptoms and disease are caused by the chemic poisons produced by the micro-organisms. Here three possibilities present themselves. The organisms themselves may be poisonous, or the poison may be an integral part of them. Secondly, the micro-organisms may be intimately associated with, or may produce a soluble chemic ferment, which by its action on the body produces the symptoms of the disease and death. Thirdly, poisons may be produced by the cellular activity of the bacteria. The correctness of this theory has been tested by a large number of investigators, with the result that its correctness has been fully established. It is now known that the pathogenic germs grown in meat broth and other culture media, elaborate chemic poisons which when injected into animals induce, in an acute form, one or more of the symptoms of the disease caused by the micro-organisms. It can now be safely stated that every germ which produces disease does so by virtue of its chemic poisons.

The diseases most frequently found by the inspector are hog cholera, swine plague, tuberculosis, metritis, peritonitis, pleurisy, pneumonia, bruises, tumors, nephritis, and hogs that have died just previous to time of slaughter.

We will turn our attention for a few minutes to hog cholera and swine plague, which are by far the most frequent causes for condemnation. The causes of these diseases are bacilli, differing in many ways and alike in many respects. They are the *bacillus cholera suis* and the bacillus of swine plague, which I will not describe. In giving the pathological lesions, those only that may be readily seen by the inspector in his hurried examination will be dwelt upon. Probably the first symptom seen is the red spots which appear upon the surface. They may

be small spots, a little larger than a pin-head, but close together, or much larger ones, the size of a pea. Others may be close together, perhaps coalesced to form still larger ones, and I have seen other severe cases with scarcely any spots at all upon them. Still other cases will have a diffuse redness around the scrotal region and a red line along the underside of the abdomen. In some it will be confined principally to the ears, which will be much swollen and covered with red spots. In the majority of cases the spots will be thicker and better defined on the thinner and softer portions of the skin. The appearance of the intestines varies much with the severity and stage of the disease at the time it is seen. As they are dropped upon the bench beside the inspector they may not attract any particular attention. The lymphatic glands of the mesentery may be inflamed. If the intestine is slit the punctiform hæmorrhages may be found, or in more severe cases the button-like ulcers; still others will show the mucosa sloughed away for a long distance and the inflammation extending through the wall of the intestine showing severe inflammation and extravasation of blood into the mesentery and the surrounding fat. The kidneys also have small punctiform hæmorrhages in the cortex and frequently in the extremities of the pyramids. The peritoneum occasionally presents hæmorrhagic areas, especially upon the sides, and easily noticed against the fat, which forms a white background. The spleen is enlarged, swollen, full of blood, very soft and brittle, dark colored, almost black. The lungs present a varying appearance, sometimes only a few small areas of congestion will be seen, while in others larger portions will be involved in a pneumonia. Punctiform hæmorrhages may also be seen on the base of the tongue, on the heart, and in severe cases in nearly all parts. The lymphatic glands throughout the system are much enlarged, swollen, congested, and when cut appear to be full of blood. Sometimes the glands will appear to be inflamed only upon the surface.

The bones appear normal upon the surface, but when cut the cancellated structures will appear very black.

In swine plague the lesions are so similar to those of hog cholera that it is hard to distinguish one from the other, and the two diseases are seen together so frequently that it can not be done in the short space of time allowed us for examination. The principal difference seems to be that in swine plague the disease begins in the lungs, and spreads from there to other parts, while in hog cholera it appears to have started in the intestines and extended from there to other parts. But the pathological lesions are so similar that a positive post-mortem diagnosis can not be made without the aid of a microscope.

Why do we condemn for this disease?

First, for sentimental reasons.

Second, we find that the hog cholera bacillus produces a ptomain which has been called sucholotoxin, and a proteid substance called sucholoalbumin. Experimentally these substances, in very small doses, are not fatal to experimental animals, but in larger doses they will produce death with some of the prominent symptoms of hog cholera. A properly regulated dose will produce a sickness for a short time, when recovery will take place and afterward the animal will show some immunity from the disease.

Dead Hogs.—One difficult point oftentimes is to be able to say absolutely whether a hog has died a short time before it was stuck and scalded, or whether it was poorly stuck so it did not bleed out well and consequently fell into the tub alive and was drowned while being scalded. In both cases, when the animal reaches the inspector it will show that it has not bled out well. The lungs, kidneys and liver will be full of blood in both cases. If the hog was poorly stuck and dropped into the scalding tank alive, there would still be the peristaltic action of the bowels, some twitching of the muscles and possibly some beating of the heart, while in a dead hog these would be absent. Sometimes in cases difficult to make a clear distinction, if they are permitted to hang in the cooler for a few days the dead one will show signs of decomposition. The dead ones are always condemned, no matter how well they may

appear after they are dressed and hung in the cooler. The hogs frequently die from exhaustion, heat and asphyxiation. In these cases we would have in the flesh a large amount of the waste matters of the body, which have not been thrown off, and being full of blood, putrefaction soon starts, consequently the flesh would be filled with the ptomains of putrefaction, which are putrescent and cadaverine. These ptomains are capable of producing strong inflammation and necrosis. Cadaverine is one of the substances which can set up suppuration in the absence of bacteria. In Asiatic cholera the necrosis of the intestinal epithelium and the muscular spasms are thought to be due to this same product.

Tuberculosis.—In tuberculosis the pathological lesions of the disease are so well known that I will only make a few remarks which will apply especially to the disease in swine. It originates most commonly from ingestion, so that the disease does not appear first and most prominently in the lungs and respiratory tract, but in the digestive organs and their accessory glands, principally in the liver and spleen. Here it is seen either as miliary granulations scattered in great numbers throughout the thickness of the organ, or else of rounded nodosities, which are yellowish white in color, varying in size from that of a pea to that of a hazel nut.

On section they appear sometimes softened in the centre, but rarely infiltrated with calcareous salts. Lesions similar to those of the liver may be seen in the lungs in severe cases, but generally there is found in these organs an innumerable quantity of minute gray granulations caused by generalization through the blood stream, in which case the liver, the spleen, the kidneys, the medulla of bones and the mammæ usually infiltrated with similar growths. Cases are sometimes seen in which the disease appears to be localized in a few glands. The tonsils and the pharyngeal or submaxillary glands are the ones most often affected. They become voluminous, hard and knotty, as they have undergone a true fibrous transformation; here and there small yellow foci are seen of a softer consistency,

sometimes veritable purulent collections are found, either encysted or in communication with the exterior. If the caseous or purulent matter be subjected to an examination, tubercle bacilli are not usually found, but upon inoculation they are found to be present. The generalization of the disease, especially in the muscular tissue, is reported by several observers.

Why do we condemn for this disease?

I think there is not one present at this meeting who would hesitate to condemn a hog for tuberculosis. I condemn every one found that shows any symptoms of the disease, because in swine it becomes generalized so quickly, and the result of experiments upon this subject show that the muscle juice of tuberculous swine is often virulent. Another point worthy of consideration is the increased danger from the consumption of meat from tuberculous swine over tuberculous cattle, which is due to its greater tendency to become generalized in swine. The consumption of tuberculous pork by a person inclined to be tuberculous or who is afflicted with the disease in a latent stage, would be like taking a small dose of tuberculin and it would produce the same effect, that is, to awaken the disease afresh and start it on its deadly course.

"THE VETERINARIAN A FACTOR IN POLITICS."

BY T. B. NEWBY, V. S., PANA, ILL.

Read before Illinois State Veterinary Medical Association, Feb. 21, 1900.

As the present century opens or closes, whichever arm of the argument you wish to accept, it finds us living in an age of ever and rapidly changing conditions; an age, indeed, in which the sluggard is remembered only in name; when the successful man keeps abreast of the tide and does not wait for that mighty current to catch him in its drift, until he awakes to activity and views his lost opportunity. A time when the struggle for political supremacy is strained to the last point of human achievement, and he must be both a strategist and tactician, to successfully reach the goal. The politician of the old school

now rarely attempts an issue, by being next to the hearts of the people as a mass. With class arrayed against class, it does not require an Elijah nor a Daniel to see that this condition forebodes no good to our nation.

I believe this has been the cause of the veterinary profession wandering around in the wilderness so many years struggling for recognition. We are more or less disjointed with the times. We presented just and conservative petitions to the law-making bodies, relied upon their merits, and believed the men we had elected to office would successfully do the rest.

There were always some men in the profession doing their best and spending their money as well to consummate the attempted issues; while others, like a team unable to move their load, would give a little pull and stop, and some do much worse at times by trying to block the wheels entirely. Doubtless at times the executive never knew from personal acquaintance or correspondence that there was any veterinary interests in his district that he was supposed to legislate in favor of; if he did, as was often the case, he failed to render unto Cæsar the things that were Cæsar's.

Particularly is this true with the Army Bill. As American born citizens, taught to reverence our flag as one of the fundamental principles of manhood from our birth, emblazoned with our nation's history, emphasized just now when the world is looking upon us with wonder and admiration at the valor of American arms in foreign lands, and our navy upon the seas—these inspiring thoughts of loyalty intensify our feelings with odium, chagrin and mortification, when we remember that the much needed rank that our profession symbolizes has been ingloriously declined.

Are our aspirations in our proud army to be nothing more than in the dark ages? Is our profession in the army to be relegated far beyond that of less successful or chivalrous nations? These are the questions for us to settle. After repeated travesty at justice by the United States Congress, our efforts have amounted to simply this: A veterinarian appointed

under the act of Congress approved March 2, 1899, is not a commissioned officer nor an enlisted man, but a civil employee. Compare this, if you will, with the other armies of the civilized world. In most of them the veterinarian enters the army as a lieutenant and by promotion may become a veterinary colonel or the intermediate rank. It is estimated in the German army that the veterinarian saves twenty times his cost, and doubtless if such an expediency were adopted in the American army, and the veterinarian was given like authority in supplying and equipping in common with his other duties, more than this might be saved our government. With this in view it strikes me that the citizen and taxpayer should be more interested than the veterinarian. The question may be asked, what is our duty as to political matters involving our interests in general? Am I admonishing you to become politicians? No, not in a special sense of its acceptance beyond the incentive of self-preservation. If I were, I should say few, if any callings are endowed with so many privileges tributary to influence through extensive acquaintances and subsequently numerous friends, which he might use to advance political or social ambition if he so elects. But, this is not the objective thought we desire to present. Sentiment, based on influence, is a vain thing to build on; but rather to be established is the endowment of a profession noble in its calling, so upbuilding in its every duty to society, that time cannot mar its inherency.

It is congratulating to know that our profession is rapidly developing this desired condition, and let us not tire in well doing, until we take our place as one of the first sciences of the land established in every branch of commerce or concentrated society.

To accomplish this means hard individual work, characterized by thoroughness, dignity and self-respect, which emphasizes and promotes character, and endows one with reserve intellectual power, such as Daniel Webster possessed when he made that instantaneous reply to Robert Y. Hayne, of South Carolina, in 1830, concerning the doctrine of nullification, or

the strategy that Dewey possessed when he created that breakfast story while destroying the Spanish fleet in Manila Bay, and wanted to take time to make an inventory of his ammunition.

Legitimate tact judiciously used to impress the thinking people of the best merits of the profession is to be commended. Men of sense never confuse issues or choose the wrong time for their purpose. It is no uncommon thing to see men of high intellectual attainments incapable of self-support, because they lack certain qualifications of imparting their knowledge; wisdom is useful so far as capable of being applied.

There is to-day vast unhidden possibilities for the ambitious and resourceful veterinarian. Under the plan of American institutions, men rapidly climb the ladder of fame, because it is one of the possibilities for all, and that applies to us, and it is our duty to grasp the spirit, develop our latent faculties; and that which belongs to us we will have, because the executive officers and political assemblies cannot then help recognizing us as public benefactors, and our social position.

As it now exists it is a political matter, and whatever we receive we must fight for; as, in the language of David Harum, "There is many a hole in a ten-foot ladder."

"DOCKING."

By J. E. RYDER, D. V. S., NEW YORK CITY.

Read before the Veterinary Medical Association of New York County, March, 1900.

It is not my intention to enter into the history of this well known and ancient operation, but merely to briefly describe the different methods of operating at the present time, to present to you the legal side of the operation, and finally to ask your opinion whether we are justified in performing this very common operation of fashion.

The reason why I ask this question is that the "veterinary profession" gets the credit of every docked horse that travels our streets, but on investigating the subject I find that only about 10 per cent. of the docked horses of New York are oper-

ated upon by qualified veterinarians, fully 90 per cent. being docked by horse dealers, coachmen, grooms, and the self-styled professional dockers.

Twenty-five years ago the operation performed for fashion's benefit was far more extensive than at the present time, requiring from two to three weeks to complete all the details, for not only was a certain amount of the tail amputated, but caudal myotomy was also performed.

The *modus operandi* was first caudal myotomy, then the tail was placed in pulleys for two or three weeks, or until it would maintain an angle of 45° ; then the final operation of amputation was performed. This was accomplished by parting the hair at the desired point, and then finely braiding it from the body down to that point; a stout cord, drawn sufficiently tight to interrupt the circulation, was then applied around the tail above the seat of operation; the tail was then laid upon a solid block of wood, and an axe, hatchet or cleaver was laid across the tail at the point of operating, and struck a sharp, quick blow with a mallet, and the amputation was accomplished; the hæmorrhage was then controlled by the actual cautery or a ligature of stout cord drawn around the tail close to the end, which was allowed to remain forty-eight hours, the stump after that time being treated as a simple wound.

Thus were the famous "fan-tailed" horses of twenty-five years ago made. Since that time surgery has made rapid advances, and the qualified veterinarian of to-day, when called upon to perform the operation, when injury or disease require it, operates in a far more scientific, skillful and humane manner; but the men who operate on the 90 per cent. for fashion's benefit have advanced but very little from the method of our fathers.

The method most popular among the laity to-day is to braid the hair from the body down to the desired point; a stout cord is then drawn around the tail above the seat of operation to interrupt the circulation; a heavy docking knife or shears, of which there are several styles, is then used in amputation.

These knives are large, heavy and of great leverage, the jaws being large enough to completely surround the tail ; division is accomplished by a sharp, quick closing of the handles. It is immaterial when using one of these instruments whether you amputate at an articulation or in the centre of the vertebræ, as they will cut bone with little or no difficulty, being nothing more nor less than large, heavy bone forceps.

The next and last step of the operation is to check the hæmorrhage, which is done with a firing iron of peculiar shape at almost a white heat ; this is applied to the end of the tail and held firmly to it, searing the tail anywhere from one-eighth to one-quarter of an inch. Some then place powdered resin over the seared end, and melt it with the still hot iron ; others place a small quantity of hair over the end which is melted with the hot iron. This is done to form a thick, heavy covering or scab over the end of the tail ; many do not use either resin or hair, completing the operation with the searing.

It is by this method that 95 per cent. of the tails are docked to-day. I have added five per cent., as fully half of the veterinarians use this method, on the ground that it is the quickest, easiest, and, lastly, it pleases the coachman.

Another method in operating is to prepare the tail in the same manner as in the last operation, but instead of amputating at any point, an articulation is selected ; division in this method is accomplished with a heavy curved bistoury, a circular incision is made around the tail down to the vertebra, which is then disarticulated, and amputation is complete. The hæmorrhage is checked by tying a round piece of chamois or linen filled with iron or some of its preparations to act as a styptic around the end of the tail, drawn sufficiently tight to interrupt the circulation. This is allowed to remain forty-eight hours, when it is removed and the tail treated as a simple wound.

The last method is known as the flap operation. In this an articulation is selected, the hair is finely braided down to the desired point, then turned upwards towards the body, a rubber bandage is then rolled from the operating point upward and se-

cured, which will effectively control the hæmorrhage. Others, instead of using the rubber bandage, use a rubber bandage or tourniquet; the tail is now thoroughly washed with some antiseptic. Next, either a four or a ten per cent. solution of cocaine is injected above and below the articulation to be operated upon. After waiting the usual time for the action of this drug, a long, straight bistoury is passed through the articulation from above and below. Then the articulation is cut through to the edge of the vertebra, when the bistoury is turned downward and a flap about an inch long cut from the side of the following vertebra; the bistoury is then brought back into the centre of the articulation, and the disarticulation completed; and the second flap cut on the opposite side in the same manner as the first. These two flaps are now brought together with five interrupted sutures, two above, one in the point, and two below; a layer of absorbent cotton, saturated with tincture of iron, is now firmly bandaged around the end, and the rubber bandage or tourniquet removed; the cotton and bandage is allowed to remain six or eight hours, and is then removed.

While there is more or less hæmorrhage following this manner of operating, it is never of any great amount, the tail is thoroughly washed the following day, and a small quantity of dressing powder applied; no further treatment is required for ten days; at that time the tail should be washed and sutures removed, and the one or two small points of granulations (if any) removed; cicatrization will be complete in two weeks; there is no danger of the sutures tearing out or breaking, as very little swelling follows the operation.

For several reasons I consider this to be far superior to any other method of operating, whether you operate for fashion or disease. It is painless and scientific, you have a natural end to the tail and not the exposed stump with its large cicatrix, and the complications are reduced to a minimum.

The self-styled professional docker tried to emulate this method, but failed, as he could not locate the articulations, but in order to overcome that difficulty had a docking knife made

V shape, and by placing this upon the tail he could divide the vertebra at any point and cut his flaps with a single closing of the knife.

As a result of using a knife of this kind the vertebra was splintered in the amputation, and as a result abscesses, sloughing and gangrene frequently followed, and for that reason they denounce this form of operating. The complications most frequently met as a result of docking are tetanus, abscesses, excessive granulation, and sloughing of the vertebra; none of these, barring tetanus, will follow the flap operation, and tetanus will be of rare occurrence. In my opinion the others are caused by the excessive use of the actual cautery and splintering the vertebra.

An important question, and one that we are frequently asked, is it cruelty? My answer is that when performed in any manner except the flap operation, and then without the use of cocaine, Yes. That it is an unlawful operation when performed for fashion you all know, and any one performing it is guilty of a misdemeanor. While there is no special law on this operation it comes under the general law of cruelty, which is as follows, viz.:

Sec. 655. Overdriving animal. Failing to provide proper sustenance. A person who overdrives, overloads, tortures or cruelly beats or unjustifiably injures, maims, mutilates or kills any animals whether wild or tame and whether belonging to himself or to another, or deprives any animal of necessary sustenance, food or drink, or neglects or refuses to furnish it such sustenance or drink, or causes, procures, and permits any animals to be overdriven, overloaded, tortured, cruelly beaten, or unjustifiably injured, maimed, mutilated, or killed, or to be deprived of necessary food or drink, or who wilfully sets on foot, instigates, engages in, or in any way furthers any act of cruelty to any animal, or any act tending to produce such cruelty, is guilty of a misdemeanor.

The legal definition of cruelty is as follows, viz.:

Sec. 669. Definitions. I. The word "animal" as used in

this title does not include the human race, but includes every other living creature. 2. The word "torture" or "cruelty" includes every act, omission, or neglect whereby unjustifiable physical pain, suffering or death is caused or permitted. 3. The words "impure and unwholesome milk" include all milk obtained from animals in a diseased or unhealthy condition, or who are fed on distillery waste, usually called a "swill," or upon any substance in a state of putrefaction or fermentation.

A number of cases have been prosecuted by the A. S. P. C. A., and the operator invariably pleads guilty and pays his fine, while the owner, who is the principal offender and to my mind the most guilty party, goes free. I believe the operator has great pressure brought to bear upon him—that is, those veterinarians who occasionally perform it, as it means the retaining or procuring of a good client, and in these days of strife and rivalry the temptation is strong. At the same time I believe that if the A. S. P. C. A. could procure the conviction of a few of the wealthy owners of docked horses, the fashion would soon become unpopular and the owners suddenly become humanitarians, and that the members of our profession would be the first to welcome the era of fashion.

SPASMS OF THE MASSETERS, WITH COMPLICATIONS.

By J. D. NIGHBERT, V. S., PITTSFIELD, ILL.

Read before the Illinois State Veterinary Medical Association, Feb. 21, 1900.

Under the above heading I shall call your attention to a few of the many cases of this disease or condition coming under my observation—not that I can give you the true etiology, but that I may add my mite to the very scant literature on the subject.

It is generally seen in warm weather and in animals that have been at rest for a more or less lengthy period, and usually seen after vigorous or extended exercise. A majority of the cases coming under my observation were in animals that were taken up from pasture and put suddenly to work. I am in-

clined to think that this condition arises in a great many cases from some gastric disturbance depending on disturbed nutrition and the circulation of impure blood through the cranial structures.

After somewhat prolonged exercise a profuse perspiration is noticed, and if exercise is continued this will soon cease and the animal becomes dry; then will be noticed an inability or lagging in harness, and on being brought to a standstill there will be some uneasiness, with spasm of the diaphragm and slight colicky pains, which soon pass away, followed by an inclination to wander around the inclosure or stall. At this stage may be noticed a slight turning up of the upper lip, owing to spasm of the levators of the lip, being in a tonic state, and the masseters are soon in the same condition. While the temporals are also involved, they maintain a clonic condition throughout the attack. Breathing is accelerated, the heart beats rapidly, but the pulse at the jaw is almost imperceptible; temperature high, varying from 105 to 108° F. After the initiatory stage the power of deglutition is lost. The duration of this condition is from a few to twenty-four hours.

Case I.—Aged roan mare, taken from pasture and put to work on a very warm day. About the middle of the afternoon she was noticed to be sweating profusely and inclined to stagger, and after resting a few minutes refused to go when spoken to. She was taken out and I was sent for. I found the patient as follows: Sweating considerably, hurried breathing, nostrils dilated, heart beating rapidly, pulse almost imperceptible, well marked spasm of diaphragm, mare wandering around, gait stilty, masseters in tonic spasm, temporals clonic, upper lip turned up and levators in tonic spasm, temperature 106° F.; unable to drink, would put her nose almost up to the eyes in water-bucket in vain attempt to get a swallow of water. Treatment.—A liberal abstraction of blood from the jugular, a hypodermic injection of atropine, and had the patient taken to shade, cold water continually applied to poll. I left one ounce potassium nitrate to be given in drinking water as soon as patient

could swallow; told owner I would call again next morning. Mare became easy and quiet about midnight, and was left to herself for the rest of the night. When I called next morning found patient somewhat improved and very anxious to drink, but was still unable to swallow. I inserted a tube through nostril into oesophagus, attached the hose of a syringe, and gave her about two gallons of water, in which half an ounce of potassium nitrate had been dissolved. This acted like magic, and in a few minutes she was able to swallow and was anxious for feed. Ordered her kept in shade and fed lightly.

Case II.—Bay pony, taken up from pasture and driven into town, a distance of about nine miles. Symptoms similar to Case I, with well marked emprostotonos; would place head almost to ground between the front legs with seemingly an attempt to turn a summersault. Treatment similar to above, but used tube about three hours apart. Symptoms soon subsided. Case did well.

Case III.—Bay mare with colt by her side; had been kept in a small paddock. Served early in the morning of ninth day and put in box stall. In the course of an hour or so owner noticed a slight spasm of the diaphragm, but as the mare appeared busy eating hay from a manger he thought there was nothing serious and left her until evening, when her condition was worse. I was called, and found patient with a well marked spasm of the diaphragm and masseters, etc. Mouth full of hay semi-masticated. Treatment same as previous cases. No improvement. Mare died at 5 A. M.

AN ENGLISH VETERINARIAN, advocating the standing method of castration, urges as an advantage that such a small number of instruments are necessary that they can be readily carried on the operator's bicycle, while by the old means 40 or 50 feet of rope would be cumbersome on the machine. In America the greatest argument against his contention would be that our stockmen would not permit a veterinarian alighting from his bicycle to have anything to do with his colts.

AT the examinations of the New York-American Veterinary College last month eleven were recommended to the Council of the University for the diploma.

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

*"Experience is by industry achieved,
And perfected by the swift course of time."*

HÆMATURIA IN A STEER—COMPLICATION.

By S. R. HOWARD, V. S., Hillsboro, O.

Oct. 9, 1899, I was called at night to treat a steer of Jno. Ridgeway's, near Samantha, O. His temperature was up a degree or two and his pulse somewhat accelerated; anorexia present. He would stand apparently all right for a period of about twenty to thirty minutes, then have a tendency to be a little uneasy, move a few steps, and then give several low, plaintive grunts, thus evincing more or less pain. Occasionally he would strain, raise his tail, open anus, and I have been informed from that time until he died the sphincter ani was very much relaxed.

Manual examination per rectum disclosed a few ounces of urine in bladder, and during straining his urethra pulsed slightly, and he would back and rest slightly against the wall.

He was at such times gentle and easily approached. I examined for "gut-tie," calculus in bladder, obstruction in sheath and penis. After carefully examining and watching him narrowly for at least an hour I discovered absolutely nothing to base a positive diagnosis upon. However, I observed one thing that somewhat puzzled me, and it was an enlargement or thickening several inches in length, tapering regularly to ends, occupying the urethra throughout the entire extent of the superior and inferior flexures of the penis.

Manipulation of the part caused no pain, save when sharply squeezed between thumb and finger and the finger then suddenly allowed to slip. This induced a slight twitching, especially of the flanks. His bowels had operated normally several times during the night. From that evening no one ever saw him urinate.

Owner said he had noticed upon several previous occasions a few drops of pure blood pass from steer's sheath, but thought not much of it.

I was in the country, time near midnight, and the air was real chilly. I was very, very weary, having driven fifty miles over the hills that day (Sunday), and had had no supper. There was very little water in the steer's bladder, and I thought that surely it would not be bursted by morning. The extent of whatever was in the urethra somewhat demoralized me in regard to operating. I knew it was an obstruction, and it's true I could have opened the urethra, but he did not need it then, and as he munched some corn and seemed rather comfortable by turns, I concluded to await developments until morning. I have said this steer was gentle, and so he was, even to the point of gentility, for as I was passing out the door to go to bed he raised his tail courteously and gracefully waved me a parting *au revoir*.

I arose early next morning and was the first to see the steer, and he presented all the classical symptoms of a ruptured bladder. That this was the condition of my patient I satisfied myself by manual exploration and performing paracentesis of abdominal floor. I then took breakfast, informed my patron he had best beef the steer because he was sure to die, and departed.

After my visit, upon numerous occasions I received the information, accompanied with sundry grins, that the steer had refused to die, was eating, that most wise and skillful talent had "fixed him up," and he was doing well! In the meantime I was being unmercifully chaffed and given the vinegar laugh by hollow friends with poisonous ridicule. Here was at least one case where "life was more terrible than death"—to me.

Four weeks to the day, Nov. 5th, being several miles from that farm, I called to see my former patient. I found him eating fodder and chasing the calves around the barn yard. No one being at home I cornered him and tied him up. Pulse very weak and fluttering—could not count it satisfactorily. Mucous membrane of nose had the appearance of that of a case of purpura hæmorrhagica, with very slight extravasation. Hair very loose, belly pendulous and about full of urine. His tenacity of life and remarkable vigor astonished me, and yet we were getting familiar.

Nov. 12th, five weeks to the day after I was called to see the steer, I received a telephone message that the steer was dead and about to be buried. I held an autopsy, and upon opening his abdomen so much urine ran over the ground that the spectators laid down rails to stand upon, so they would be out of the mud.

Bladder bursted, and in the penis, location as before mentioned, was an old and extremely firm clot of blood about four inches in length. I found no cause for former bleeding from penis. He lived exactly five weeks with a ruptured bladder.

I have seen a goodly number of steers with ruptured bladders, but I never before knew one to be in that condition and live over a week.

THE SCHMIDT TREATMENT IN MY PRACTICE.*

By A. G. ALVERSON, V. S., Bloomington, Ill.

Having had an opportunity several times to try the much vaunted treatment of Schmidt on what he terms "parturient paresis," and not being wholly satisfied with my results, I thought I would bring the subject before this society.

Case I.—Grade shorthorn; called in the afternoon a short time after cow had gone down and the second day after calving. My apparatus consisted of a new piece of rubber tubing, a glass funnel and a milk tube. I thoroughly cleaned the udder of the cow as she lay flat on her side, then disinfected the same. I immersed my apparatus in boiling water, made the potassium iodide solution with boiling water, cooled same by pouring from one pitcher to another and forced it into the udder by the law of gravity, thoroughly kneading same with fingers. Then rolled cow up on sternum and propped her up in that position. Gave fluid extract jaborandi on the tongue; had the rectum thoroughly raked, and left; telling them to keep her in shape through the night and I would see her in the morning. They telephoned me the next morning not to come, and I learned later that she died that day. Perhaps further treatment would have been beneficial, but they thought her getting worse, so wanted to save further expense.

Case II.—Grade Jersey, in the country; had been down, but regained feet and fell again while I was making an examination. Could not get up, and grew worse rapidly. Gave same treatment for udder, and left fluid extract of jaborandi to be given later with hypodermic syringe, if necessary. They gave two doses. This case recovered and was up next day.

Case III.—Grade shorthorn; well-marked case, complicated with eversion of the vagina, up to and including mouth of the womb, which was easily returned and kept in place. Gave same treatment as in No. II, but without success. Saw her again the next day and repeated treatment, but that night she died.

* Read before the Illinois State Veterinary Medical Association, Feb. 21, 1900.

Case IV.—Had been down only a short time, but was bad; had treated this cow two years before for same trouble. The treatment was the same as in the previous cases, being minutely careful of every detail, and particularly so as to asepsis. The following morning I had another opportunity to see the animal, who was growing worse, although she had rested quite well all day. Died.

Case V.—This case had recovered under other treatment one year before and did not appear nearly as bad this time. Gave the Schmidt treatment in detail, and followed with stimulants; but the patient died.

Case VI.—An extra fine Jersey cow, had just gone down; had calved a few days previous. Gave full and careful treatment, but lost the patient.

Am sure I gave as careful detail as possible to the treatment of all these cases, and am inclined to think my poor success was due to the inefficiency of the same. Still I see that many are claiming great results from it. That it does exert an influence on the cases I will not question, as most of them, if not all, seemed to brighten up for a time and be far easier to care for and keep in position. Would like very much to be able to do something with it, as it is so much easier to care for the cases in that way.

TWO INTERESTING CASES FROM ILLINOIS.*

By J. F. PEASE, D.V.S., Quincy, Ill.

Case I—Epistaxis.

During the summer of 1899 a small, aged mule was brought in bleeding severely from the right nostril. Neither inquiry nor examination threw any light upon the cause other than perhaps general senile degeneration of the vessels. Owing to the small worth of the animal, I began to treat quite cautiously from the standpoint of expense, using douches of clear cold water, later adding subsulphate of iron, a remedy that has always proven valuable in these cases, but with no results in this case. Tried plugging the nostrils with cotton, but this also was unsuccessful. The blood accumulated in the posterior nares until it flowed over and out the left nostril. I then administered ergot in bolus and afterward as fluid extract, until 2 oz. had been given, and repeated the douches. After another half-hour the blood was still flowing in a small stream from the nostril,

* Read before Illinois State Veterinary Medical Association, Feb 21, 1900.

occasionally forming soft clots, which would be blown out, and the stream start again. It was principally to stop him from blowing out these clots that the nostril was plugged.

Dr. Barstow, of Quincy, a practitioner of human medicine, happened to be in my office at the time and asked if I had ever used intravenous injections of gelatin solution for hæmorrhages. I had not, but felt justified in trying it on this case.

Neither of us had any data as to the proper strength to use, but I decided upon a two per cent. solution as a trial. I made one quart of a $\frac{4}{10}\%$ solution of common salt in distilled water, sterilized it, dissolved the gelatin, and cooling to the proper temperature as rapidly as possible, injected it into the jugular vein by means of the apparatus I regularly employ for intravenous injections. This consists of a regular family syringe with hard rubber connections with a bottle arranged for an air trap near the delivery tube. The delivery tube is a soft rubber human catheter, into which the needle is wired. The whole is sterilized by running boiling water through it immediately before using.

When we began the injection the mule was rapidly losing strength and the blood seemed thinner than ever. By the time we had finished the blood had begun to string down from the nose, reaching at times nearly to the floor before dropping off.

Another case having taken me to the rear of the stable for about ten minutes, upon my return I found the hæmorrhage had stopped.

The animal was given salted water at intervals until his thirst was allayed, when he was sent home. He had no return of the trouble.

Since then, another physician has shown me a memorandum from some medical journal indicating a 2% solution of gelatin in normal salt solution, intravenously in hæmorrhages—exactly what I had used.

I believe, however, that most veterinarians consider $\frac{6}{10}\%$ to be normal salt proportion for horses' blood or for delicate membranes.

Case II—Local Paralysis.

A blocky-built team horse, while at work, stepped into a low place in the pavement, seemingly stumbled, knuckling with the front feet, and immediately displayed great pain, stumbling in front and even going down upon his knees.

He was removed to his stable with difficulty, where I saw him shortly afterward. He was then tramping around with

pain and threatening to go down, occasionally knuckling with one foot, oftener the right one.

As he had been up in the stable the day previous, I suspected a light azoturia affecting the fore quarters. Bedding was thrown under him, when he voided his urine voluntarily, and its appearance (clear and light yellow) disposed of the azoturia diagnosis.

I gave at once 1 ounce bromide of potassium and 2 drams fluid ext. cannabis indica, to allay pain and irritability, knowing I had some form of spinal irritation to deal with. When he had quieted down somewhat, I began to move him up and down to study symptoms, and made out a partial loss of function in the extensors of the forearm and foot—a veritable “wrist drop.”

Could it be a local myelitis, or was it paresis due to some ptomaines absorbed from the alimentary canal? I couldn't decide, but could find no suspicion of lead poisoning in the history of the case.

I combined potassium iodide with the bromide, adding jaborandi, and kept this up in divided doses hourly during the afternoon, after which he was removed to my hospital. He fell to his knees several times on the way, but would place his hind feet well under him, rise up and plant his front feet on the ground. The pain abated, but the paralysis increased.

The muscles involved (the four extensors) are supplied with nerve force from the musculo-spinal or radial nerve. This nerve derives its roots from the first dorsal chiefly, which emerges behind the first dorsal vertebra near the head of the second rib, passes outward around the first rib to join the brachial plexus.

Some injury must have occurred to this nerve at or near its emergence from the spinal canal, or to that portion of the cord from which it arises.

This injury, possibly a sprain of the intervertebral ligaments or transversalis muscle, would be attended by swelling and pressure and possibly a blood clot. The paralysis was alike on both sides except as to degree, being more pronounced on the right side.

I kept the patient upon the iodide and jaborandi, supplemented with one-grain doses of pilocarpin, hypodermically, twice daily, for several days, when the pilocarpin was dropped and nux vomica in stiff doses added to the mixture above-mentioned.

About this time (the third or fourth day) I noticed a soreness upon pressure over the vertebræ at the base of the neck,

near the location of the brachial plexus. I, therefore, applied a biniodide blister over the part, first on one side of the neck, then on the other, and repeated the application in two days.

Improvement set in at once with this treatment and the horse was taken home at the end of ten days much improved. He is now at work (a month later), but is not entirely well.

A TRUE CASE OF RABIES IN THE HORSE.

By JNO. V. LADDEY, D. V. S., Arlington, N. J.

Was called one evening to see a brown gelding, said by the owner to have muscular rheumatism, because "he wouldn't let any one touch him." Upon arriving I found a very vicious animal, striking, kicking and biting at everything within his reach. The approach of any person would rouse it to a renewal of such unruly demonstrations.

There had been nothing wrong with him until noon that day, when the animal became very nervous and irritable and started kicking at nearby objects, a most unusual thing, as he had always been a very gentle horse.

After having been returned to the stable he gradually became worse and finally so furious that it was dangerous and impossible to go near him.

By his striking and kicking he broke down his stall partition. The tendency to bite increased, some tenesmus was present, his neighing became altered, his gait staggering, and salivation and grinding of teeth set in.

Everything seemed to irritate him; he would make vicious lunges at beams and posts in his stall and bite at all objects held to him.

At an opportune moment I managed to get his pulse, which was very much accelerated, but I utterly failed in the effort to get his temperature.

I diagnosed the case as one of rabies and gave warning and prognosis accordingly.

Later the owner recollected that about two months preceding this incident a vicious dog, who had been housed in the stable for some time, had suddenly disappeared after having exhibited some very suspicious symptoms.

I saw nothing in the horse's actions by which the point of inoculation could have been traced.

I prescribed potassium bromide in the drinking water and instructed the attendant to keep the animal as quiet as possible and to prevent his being annoyed or unnecessarily irritated.

Early next morning the animal died, paraplegia having set in at the last. After procuring portions of the brain and the spinal cord, I sent the same to the New York Pasteur Institute for experimental inoculation, and received three weeks later the following reply:

NEW YORK PASTEUR INSTITUTE,

No. 313 W. 23d Street, NEW YORK, March 8, 1900.

Dr. John V. Laddey, Arlington, N. J.:

DEAR DOCTOR—We beg to inform you that the rabbit inoculated on Feb. 15th last with a piece of the brain which you sent us, died on Wednesday morning, the 7th inst., after having exhibited all the symptoms of rabies. * * *

Very truly yours,

N. Y. PASTEUR INSTITUTE, Per E. E.

DEPARTMENT OF SURGERY.

BY L. A. AND E. MERILLAT,

of the McKillip Veterinary College, Chicago, Ill.

ANTISEPTIC WOUND TREATMENT (CONTINUED FROM VOL. XXIII, PAGE 890).

Routine of Wound Treatment (Continued).

Removal of Foreign Matter or Tissues that will Become Foreign and Hinder the Healing Process.—Shreds, sloughs, sequestra, foreign matter and infected granulating surfaces should be promptly and intelligently removed from all wounds, either surgical or accidental. It is in this step of wound treatment that one surgeon may demonstrate his superior ability over another. The skilled surgeon will intelligently perfect his procedure by cutting away this or that part with a scissors, scalpel or curette, while the bungler either omits something or else jeopardizes the healing of the wound, if not the patient's life, by intruding upon forbidden ground.

The aim should be:

1. To remove all extraneous matter.
2. To rid the wound of all tissues that can be spared, and that will interfere with the healing process, as a consequence of their impaired vitality or death.
3. To make the wound as smooth as possible, so as to destroy all recesses capable of harboring wound secretions.
4. To "mechanically disinfect" the wound as far as possible by removing infected textures.

To accomplish these feats often requires the acme of surgical skill and judgment. In the case of surgical wounds they con-

stitute the operation proper. Each of these steps should be completed on first treatment, with the exception of diseased bones and shreds of skin. It is frequently advisable to wait until the "line of demarkation" is distinct before attempting to remove a bony segment, because waiting will obviate the removal of a second piece, which usually exfoliates from a chiseled or sawed surface. As regards the skin the finest shreds should be preserved. The amount of skin that will reproduce itself is not large, and as the integument is an important factor in determining the size of the cicatrix it must always be considered poor surgery to thoughtlessly cut it away. And, again, shreds of skin carefully sutured will frequently serve as a protection to the wound for a few days, even if they must be removed later, and frequently such shreds will take on new life over a much larger area than was at first expected.

But aside from these two exceptions—bone and skin—the wound should at once be so perfectly "trimmed" that a second operation will seldom be necessary. The surgeon who overlooks a piece of wood in a punctured wound, a necrosed spine in a fistula of the withers, a segment of diseased cartilage in a quitor, a sequestrum in gnathitis, or even the shreds of a lacerated wound, will soon suffer the consequences of a lost professional reputation.

Hæmostasis.—After completing the preceding step the surgeon is then confronted with the task of arresting the hæmorrhage, which may vary from slight capillary oozing to the spurting of a large vein or artery. In either case hæmostasis is an important factor. If not in actually saving the patient's life, nothing can have more influence in the healing of a wound. A wound that is filled with blood cannot heal with the desired promptness under any circumstances and is always a fit field for septic processes. The practical veterinarian is, however, too well aware of the difficulties in this connection. It is very nice to read about applying torsion or ligating vessels, but when the feat is undertaken it is not so easy. The trouble is we can seldom find the vessel in the recesses of a wound to apply such treatment. The only vessel that can be satisfactorily ligated or twisted is the superficial spurting artery. The others located in invisible recesses can not be ligated nor even twisted. The moderate, mysterious, venous hæmorrhage that is just profuse enough to prove annoying and capillary oozing can be arrested by patient baling and compression, but when such bleeding is profuse no amount of ordinary patient efforts

will accomplish the purpose, and the only recourse left is to pack and close the wound. The patient in the standing position soon becomes restless and the one in the recumbent position would suffer from being tied long enough to arrest these troublesome hæmorrhages. We are therefore justified in prolonging a procedure to arrest severe hæmorrhage only when the results would warrant. In most of the veterinary surgical wounds it is more practical to promptly pack and close a wound and then leave the subsequent steps of the treatment to be performed twelve to twenty-four hours later.

Wounds, for the purpose of hæmostasis, might be classified into: 1, wounds with profuse hæmorrhage; 2, wounds with moderate hæmorrhage, and 3, wounds with only capillary oozing, but from a strictly practical standpoint a better classification is found in the following:

1. Wounds with hæmorrhage that can only be satisfactorily arrested by immediate packing, or cauterization.

2. Wounds with moderate or slight hæmorrhage that can be promptly arrested by torsion, baling and styptics.

The first class include a large share of the surgical wounds, such as quittor, fistulæ of the withers, poll-evil, ablation of tumors, foot lesions, caudal amputations, castration, and many others too numerous to mention. In all of these wounds it cannot be denied that the results would be much better if in the course of the operation all the blood was controlled perfectly so that the remaining steps of the treatment—disinfection and dressing—could be done to better advantage, but that it is not always practical nor even possible to control bleeding in the many veterinary operations, except by packing, is a fact that all experienced veterinary surgeons are well aware of. Some wounds of this class are nicely handled by actual cautery, but, of course, that cannot be universally adopted on account of the interference with healing. But, as referred to above, in the great majority of surgical wounds the only recourse the veterinarian has that is entirely practical is to pack the bleeding wound with clean antiseptic wadding of oakum and hold it in place with temporary sutures or bandages, as the case may require. In twelve hours all danger of hæmorrhage is over, and when the temporary dressing is removed the wound can be closed and properly dressed without the annoyance always caused by blood. Such temporary waddings should only be left in place until they have fulfilled their mission, *i. e.*, hæmostasis, then they are promptly replaced with dressings which are

conductive to the general welfare of the wound. The tension caused by the packing, which is always increased by the addition of blood, will entirely change the aspects of a wound if allowed to remain in place too long, and besides, the possibility of sepsis is augmented. As a useful hint in veterinary surgery the importance of this method of arresting hæmorrhage cannot be overestimated.

The second class requires more delicate manipulation, and I might add patience. The slightest oozing cannot be immediately arrested under any circumstances without applying agents that will interfere with the integrity of the wounded tissues. Even the too liberal application of forceps pressure and torsion to oozing spots is by no means without its detrimental effects, for every speck of tissue that is so bruised adds to the inflammation and therefore retards healing. The forceps should then only be used upon the larger vessels and the minor ones controlled either by baling with dry cotton or with hot styptic solutions. A weak tannin solution applied to a wound at a temperature of 115° Fahr. has a wonderful effect upon oozing vessels and does not coagulate the albumen of the tissues sufficiently to do harm. Cold water has only a very temporary styptic effect. It actually increases bleeding if continued for considerable time.

In wound treatment we can only recognize permanent hæmostasis; so, therefore, the tourniquet, compress, etc., used to arrest hæmorrhage during an operation belong to surgery proper.

A further study of the subject might be made by glancing at the various methods by which hæmostasis is produced:—

1. By compress packing.
2. By irrigation with mild styptics.
3. By forceps torsion and compression.
4. By ligation.
5. By cauterization.

Each of these methods has its special indications; compress packing when the hæmorrhage is profuse and there is no time to arrest it by other methods; irrigations with mild styptics for capillary oozing; forceps torsion for more profuse bleeding; ligation for superficial spurting vessels; and cauterization when prompt healing is not a consideration.

Secondary Hæmorrhage.—The subject of secondary hæmorrhage is of sufficient importance to warrant brief notice, but it is by no means as important in veterinary as in human surgery.

Hæmorrhage may again start in a veterinary wound the first, second or third day (or even later) after an operation from bumping a wound against the stall, lying upon a wound, or by moving when a wound is near a joint, but the more serious form is the one caused by the sloughing of a ligated stump of an artery or large vein. A vessel that is friable from disease may bleed when the stump sloughs away too soon, but under ordinary circumstances a vessel that is properly ligated, even though it be a very large one, should not cause any trouble. If the human surgeon can successfully ligate the renal artery and vein in ablation of a diseased kidney, the veterinary surgeon should certainly not fear serious results from the comparatively minor vessels that are met in the various operations and accidents.

The key to successful ligation is to have the ligating thread neither too large nor too small. The thread should be small enough to wound the internal coat of the artery so that the wounded endothelium may form a nucleus for the coagulum. It is also said that if the internal tunic is cut through its contractility will partially occlude the lumen of the vessel. If the thread is too large these results are not obtained, while if too small the stump may slough away too soon, and in either case secondary bleeding may be expected. The metacarpal and the metatarsal arteries can be safely ligated even without complying with these precautions, but the carotid and thyroid arteries and the thyroid veins require perfect ligation.

Wound Sterilization—Disinfection of Wounds.—After a wound is free from blood the next step is to attend to its disinfection. "Mechanical disinfection," previously referred to, constitutes one of the most perfect methods of ridding a wound of infective matter, but since such a feat can never be accomplished without causing hæmorrhage it must be done before one has gone to all the trouble of arresting the hæmorrhage. Surgical or mechanical disinfection having been attended to in the second step before hæmostasis, there remains to be discussed only "chemical disinfection," *i. e.*, the disinfection of wounds with antiseptic drugs.

A surgical wound made in a non-purulent area should require no disinfection whatever, if the surgeon's methods have been correct and no accident has occurred during the operation to carry infection into it. But accidental wounds and purulent surgical ones require perfect sterilization. It matters not how soon a wound is treated after the accident, it must be put through a systematic and intelligent cleansing process, even

when the wounded body appears to be clean. It is never safe to regard an accidental wound "clean enough;" the circum-spect surgeon acts under the supposition that infective wound organisms are everywhere and governs his treatment accordingly.

Here the reader might well be reminded of several points referred to in previous chapters: 1. *That wound organisms are more viable than the living animal cells.* 2. *That, as a consequence of their viability, they cannot be readily destroyed with antiseptics that will not also "kill" the wounded tissues.* 3. *That, without injury to the living animal cells, no form of sterilization will readily make septic area aseptic.* 4. *That the aim in wound treatment is to render organisms as innocuous as possible and then create conditions not favorable to their farther development.*

The reader who will but digest the principles which can be deduced from these simple propositions will have mastered the subject of antiseptic wound treatment, while the one who disregards them will ever be groping in the dark, if he does not give up the whole affair as a hopeless undertaking. When one examines a wound about the third day, after having treated it with great care, and finds it discharging a purulent secretion, the inclination is to entirely discard the idea of asepsis in veterinary surgery. Such should not be the case, however. Failure, or even failure upon failure, should always be met with the most searching inquiry into its cause. When a wound becomes purulent there has been an error in its therapeutics, some part of the technique has been faulty, and the duty of the surgeon is to ferret out the faulty step. Perhaps the irrigation was not intelligently executed, perhaps the unclean fingers were inserted into it, perhaps the sutures were doubtful, and so on through every item that was in any way related to the wound before and during its treatment. Furthermore, by studying these four propositions it at once becomes apparent that wound sterilization is not a simple matter that can be accomplished by mere washing of a wound with antiseptic solutions. It is of course true that pyogenic organisms are killed by immersion in antiseptic solutions of certain concentrations for a given time, but when the irrigation of a wound is prolonged in compliance with such facts established in the laboratory it must not be forgotten that the tissues also suffer from prolonged immersion. Chemical substances that will promptly kill organisms and not molest the tissue albumen do not exist, nor is it at all probable that any

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such substance ever will exist, in spite of the fact that such an agent would be of inestimable value. The more the subject is discussed the more apparent becomes the necessity of taking advantage of aseptic surgery when possible, instead of depending upon the doubtful possibilities of antiseptic surgery. The fact that an organism once located within a wound is really a tenacious enemy to dislodge should be a warning not to permit its entrance.

Given a recent accidental wound that has just been subjected to the treatment described in the foregoing steps, what form and manner of sterilization does it require? Granted now that it has been examined, trimmed, and all hæmorrhage arrested, what further should be done before it is finally sutured or otherwise closed? Let us take, for an example, a wound caused by the kick of a horse; one that has been exposed for several hours. The shoe has in all probability carried pus organisms into its deepest parts and the dust of the stable has no doubt polluted its whole superficial area. Now, if such a wound is simply bathed with an antiseptic solution and closed with sutures, then protected as well as possible, it will be discharging pus often in thirty hours, and in six days the whole affair bursts open and leaves an ugly wound, which is *always* unfavorably commented upon by the interested observers. What veterinarian has never heard the remark, "The stitches have all broken, come and sew it up again, doctor"? It is indeed a poor strategist who cannot find some logical excuse for such an accident, but the real cause in 90 per cent. of the cases is sepsis. Poor drainage, movements of the patient and tight sutures may all be the cause of a wound breaking open; but when properly sterilized the chances of such a disaster are materially lessened.

The first treatment to apply to such a wound is a patient bath of hot water at about 115° Fahr., scrupulously clean sterilizer when possible, and containing a small amount of mercuric chlorid or carbolic acid. One to 2000 of the former and 1 to 100 of the latter is strong enough for this purpose. The aim in this is to wash out clotted blood, loose shreds, pus or whatever the wound contains, and at the same time disinfect and take advantage of the invigorating effect of heat to a wounded tissue. The next step is to irrigate with a stronger solution, 1-1000 mercuric chlorid, 1-100 formalin, 1-30 carbolic acid, or 1-6 chlorozone may be used for this purpose. They should be applied by syringing quite forcibly into every recess for 5 to 15 minutes, or even longer, according to the probable amount of

the infection, then the process is perfected by sprinkling lightly with euophen or iodoform. The former is readily applied to the minutest recesses of a wound by insufflation, and the latter if selected for the purpose is best applied by spraying with 5 per cent. to 10 per cent. iodoform ether. The wound is now ready to close, being as sterile as it is practicable for the veterinarian to make it. (*To be continued.*)

SURGICAL ITEMS.

Do you have trouble in extracting molars? If so, probably your instruments are faulty. There is no feat in the whole domain of surgery that requires more dexterity, more judgment and more specially constructed instruments than the extraction of the molar teeth of horses, and it is pretty safe to venture that no procedure is performed with less dexterity, less judgment and with less poorly constructed instruments. What we lack in the dexterity that can only be acquired by extensive practice might in a large measure be overcome if the instruments were properly designed. The manufacturers of instruments, who indeed seldom even see a horse and of course have no accurate knowledge of the requirements, are usually the designers of our dental instruments, so there is no wonder that the requirements are seldom met. We Americans who claim to be the very "masters of ingenuity" are far behind our European colleagues in this connection, because we trust all to the manufacturers and accept their designs as standard when in fact the instruments (I refer only to dental instruments) they furnish are scarcely worth their weight in scrap. In a subsequent issue the Department of Surgery will devote a chapter or two to dental instruments. Any suggestions from the readers of the REVIEW that will add to the value of the discussion will be highly appreciated and due credit will be given to such contributors. (L. A. M.)

Professor Williams, of New York State Veterinary College, promises the early appearance of a new manual on veterinary operations. The book, we are informed, will be confined to a lucid description of the technique of the more useful major operations performed by the veterinarian. Besides the original operations and methods of the author and other American practitioners the work will also include a compilation from Pfeiffer's Operations. While the author's intention is to supply the want of the student it is safe to predict that it will also be received with open arms by the practitioners. The veterinarian who

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does not operate continually finds a lack of knowledge of the minor details of surgical technique is the real obstacle. The value of a book that will remove this obstacle can hardly be over estimated. (L. A. M.)

Professor Moller in his new work on veterinary surgery says that the results from aseptic castration do not outweigh the advantages of the old method. He, however, does not fail to remind the reader that cleanliness can not be overdone, even when absolute asepsis is impossible. If the learned and skillful Professor Moller's "ordinary method" refers to dirty surgery of the American oöphorectomist, surely then he has left himself open to criticism. "Ordinary" surgery is never justifiable. In veterinary operations, and especially in castration, the rule should be to carry asepsis as far as practical. In the case of castration the operation, without additional cost and without much additional time, can be made an aseptic one to the point of applying an occlusive dressing, and no reasonable excuse whatever can be offered for not doing so, Moller's statement to the contrary notwithstanding. Suturing the wound and then protecting it in some way or other is of course neither practical nor desirable, but if the operation is accurately executed through each step and the patient is made to stand in a clean stall for five or six days sepsis will rarely progress beyond the scrotal incision, and even this may heal without the semblance of a septic process. A doubtful ecraseur or emasculator and unclean knives or hands applied to the cord which will afterward discharge a purulent secretion over the whole inguinal canal is the chief cause of septic sequelæ and not infection after the operation, as is generally supposed. (L. A. M.)

Europhen as a Substitute for Iodoform.—Europhen is an orange-colored, non-crystalline powder, containing 28 per cent. iodine, which, like iodoform, it liberates when brought in contact with wounds. It is inodorous and hence not objectionable from that standpoint. It possesses the unique and very much desired quality of adhering well to wound surfaces—a property iodoform does not possess—and its high potency as an antiseptic is observable on first trial. It promotes granulation and limits secretion quite as effectually as iodoform, and as a given quantity will cover a much larger surface, it is more economical. Europhen deserves a thorough trial in veterinary surgery and if it proves equal to iodoform, as evidence at present indicates, it must surely become its universal substitute. It is a product of the Farbenfabriken of Elberfeld Co. (L. A. M.)

EXTRACTS FROM EXCHANGES.

ENGLISH REVIEW.

OPERATIONS FOR RADIO-ULNAR DISLOCATIONS [*By F. Hobday, F. R. C. V. S.*].—This injury has been more or less common, but seems to be more frequent among young puppies varying between the ages of a few weeks to three or four months. The difficulties of the treatment consist principally in permanently keeping the bones in their normal positions, no matter what kinds of splints and bandages are used. Among many cases the following is recorded: A nine weeks old puppy had a congenital dislocation and firm adhesions had formed round the joint. The little fellow was chloroformed and the adhesions broken off, the bones replaced in position; but on the following day the trouble had returned. Anæsthetized again, an incision was made directly over the joint and the skin dissected as far as necessary to permit small holes to be drilled through the olecranon and the centre of the radius. Fine wire thread was passed through them and the two bones fixed into place. The wound was sutured and antiseptic dressings applied. With the exception of a little complication on the skin, due to insufficiently padded splints, the dog did well and after a few days showed considerable improvement. The bones remained in position and the dog did not seem to suffer the slightest pain, using his leg in walking, although not quite as freely as the others.—(*Vet. Record.*)

ECTOPIA CORDIS [*By H. McF. Anderson*].—A very unusual condition observed by the author in a calf, which presented a swelling on the near side, which he recognized for the heart. Throbbing at the neck was readily seen; pressure upon it was very disturbing to the animal; thoracic auscultation did not reveal any sound. The animal was slaughtered and the heart was exposed at the lower part of the neck, in front of the chest, with the apex pointing towards the head and its base towards the thorax. It seemed normal in structure and had a pericardial sac enclosing it. The large blood vessels passed through the arch of the two first ribs. The organ seemed elongated.—(*Vet. Record.*)

FRACTURE OF THE CRANIUM IN A MARE—SURGICAL INTERFERENCE—DEATH [*By W. M. Scott, F. R. C. V. S.*].—A

mare probably kicked by another horse which got loose from its stall was found one morning with a cut over the forehead on the median line and measuring some 6 inches in length. Twenty-four hours after she showed evident indications of brain pressure: difficult motion, gait staggering, her head depressed, sight sound, pulse steady 45, temperature 105.1° F. The mare was quite restless when the wound was explored. Pressure on the right parietal bone produced convulsions, clenching of the teeth and nodding of the head. The following day the mare was chloroformed, and the wound being examined showed a cavity under the right temporal muscle, which being cut across exposed a piece of bone depressed and forced in nearly half an inch. This was removed at once and the cavity dressed antiseptically as thoroughly as possible. The animal at first exhibited some comfort from the removal of the pressing piece of bone, but she rapidly grew worse and died in the evening of the day she was operated upon. On examination of the skull it was noted that no fracture radiated from the depressed part, as might have been expected considering the age of the animal and the hardness of the bone.—(*Vet. Record.*)

FOREIGN BODY UNDER THE LARYNX OF A DOG [*By A. Wilson, M. R. C. V. S.*].—After one day's hunting a dog was found unable to eat, with abundant flow of saliva. A splinter of wood had been found in the centre of the upper gums behind the incisors and a small wound on the left side of the frænum of the tongue. The next day the throat began to swell, and the following day ulcerated, discharging a foetid sanguineous fluid. The swelling not subsiding, the author had another opportunity to examine the dog, and in probing the cavity of the abscess he felt a hard substance, which on removal proved to be a piece of hazel stick lying in the subcutaneous tissue slightly on the right side of the trachea. Ultimately the dog recovered rapidly.—(*Vet. Record.*)

FOREIGN BODY IN THE RUMEN OF A COW [*By R. O. F. Stewart*].—Of course every one knows how much foreign bodies found in the rumen of large ruminants vary, and while all kinds of objects have been mentioned and the manifestations that they have produced been described, it seems that new cases can always be found. The author had been called to visit a cow which had been for a long time under treatment, was gradually growing worse, and, whether tuberculous or not, the question of killing her was to be decided by him. When she was examined, Mr. Stewart, passing his hand over the left flank where

tapping is performed, felt something hard. He cut upon it and found it to be a piece of wire. Pulling firmly but gently, the wire gradually came out. After exposing nine inches of the wire, it got fast, and the opening had to be enlarged. A plug of foetid ingesta was then exposed, held by a joint in the wire where two other pieces of wire diverting internally were articulated. The entire foreign body was then extracted. It was an umbrella wire and stretcher, which, counting all, was about 20 inches in length. After a few days of convalescence the cow recovered. She had been grazing in a place near a house where rubbish had accumulated, and in all probability had picked up a piece of an old umbrella when covered with cloth.—(*Vet. Record.*)

REVIEW OF BIOLOGY.

ATTENUATION OF VARIOLOID VIRUS BY DESICCATION AND HEAT—[*MM. Coute and Duclert*].—Resorting to the results previously obtained on a method to obtain a large quantity of varioloid virus, the authors have tried to determine the effects of desiccation and heat on this virus. The œdematous tissue matter of a varioloid tumor is placed on a wire sieve above a wide crystalizing apparatus and the whole introduced into a sterilized exsiccator, which itself is placed for twelve hours in a freezing box, so as to allow the serosity which impregnates the tissue to run out as perfectly as possible. After that length of time the sieve is removed and the crystalizing apparatus is placed in another drying box containing calcium chloride in its bottom. This box is closed tight and put in the freezing box. The desiccation of the serosity goes on without formation of microbial cultures, and in various times according to the quantity and thickness. The virus dried in this condition forms a thin, yellowish crust, shining, easily broken. This is placed for a few days in an oven heated to 25° C. By continuing desiccation and heat the virus is gradually attenuated and a standard of virulency can be established. Inoculation of such a small quantity of virus diluted in sterilized water gives rise to local manifestations and very rarely to germatization. The dried residue obtained is sufficient to inoculate several hundred animals.—(*Soc. de Biol.*)

EXPERIMENTS ON THE ANTAGONISM MENTIONED BY SOME PATHOLOGISTS BETWEEN TYPHOID FEVER AND TUBERCULO-

SIS—[*By MM. Arloing and Demarest*].—Impregnation of tissues with complete cultures of bacillus of Eberth with filtrated toxine or with the serum of immunized subjects, when it is done before or after inoculation of bacilli of Koch, cannot prevent tuberculization of guinea-pigs. However, when done before the tuberculous inoculation, impregnation by serum seems to have increased in a small proportion the resistance of guinea-pigs to tuberculization. The ideas of practitioners who admit the antagonism between the two diseases are not supported by experimentation. Yet, it is not impossible that a period of arrest or a certain improvement may have been observed in some patients suffering with typhoid fever, if their serum had acquired properties analogous to those that exist in the serum of individuals artificially immunized.—(*Soc. de Biol.*)

REBUILDING SEROTHERAPY WITH SERUM OF MILK—[*By M. Leveboullet*].—It is principally by the salts it contains that the new product acts. Hypodermic injections of the serum, harmless to the skin, have no toxic influence on healthy or diseased organisms, and can attenuate or even cure the diseases characterized by severe organic debility. It stimulates vital force and assists in protecting the organism against infectious agents. The serum of cow's milk is a thin fluid, slightly greenish but transparent. It contains 7 to 8 grammes of mineral salts to the litre. To prepare it, the milk is coagulated with pepsine while heated at 40 or 50°. After six hours cooling off, the clot is thrown on a thin, fine cloth. The sweet milk is filtrated, neutralized with soda, when a deposit takes place, and isolated by filtering through animal charcoal. The fluid which passes is then filtered again and put in glass tubes. Introduced under the skin, it is absorbed as quick as water is. No mark of the injection is left if the operation is well done; the operation can therefore be repeated many times on the same spot. In man the dose varies between 5 and 25 c.c.—(*Acad. de Med.*)

NORMAL PRESENCE OF ARSENIC IN ANIMALS—ITS LOCALIZATION IN SOME ORGANS—[*By M. Ar. Gautier*].—The author has by most minute observations found that arsenic is constantly present in the thyroid gland of man, dog, pig, sheep, etc. It is never, or, in imperceptible doses, in the other organs, except the thyroid gland and the brain. In man he found 0 m. ge. 73 of arsenic in 100 grammes of thyroid gland. This small quantity is sufficient for the execution of a function which, though still unknown, is important. No thyroid with-

out arsenic, and no health without thyroid. Arsenic is localized in the substance of the nucleus of the cells, the nucleine. —(*Acad. de Med.*)

COLLEGE COMMENCEMENTS.

KANSAS CITY VETERINARY COLLEGE.

The ninth annual commencement and banquet of this institution was held at the Midland Hotel, Kansas City, March 14, at 8 P. M., when the following gentlemen received the diploma of the college: Robert H. Carswell, Edward Makins, Jr., Claude M. McFarland, Willis H. Meadors, David C. Moberly, Charles A. Monney, Joseph W. Parker, Horace E. Rice, Wendell A. Knight, D. V. S., and William Folsetter, M. R. C. V. S. At the banquet a large number of the faculty and friends of the college were gathered, where, after the temporal man had been satisfied, the intellectual appetite was brought into activity by that prince of toastmasters, that painstaking, hard-working, conscientious and devoted veterinarian, Prof. Stewart, introducing Dr. I. J. Wolf, who delivered the faculty address. The diplomas were presented by Dr. C. J. Sihler and the class response was made by Dr. Joseph W. Parker. "Comparative Medicine" was the theme of Dr. H. C. Babcock, and "The Undergraduate" was championed by Mr. Arthur Trickett. Hon. R. J. McFarland spoke of the "Municipal Veterinarian," while J. A. McLane, Esq., dilated wisely upon "Veterinary Jurisprudence." Dr. W. Ross Cooper spoke upon the "Veterinarian and the Breeder," Dr. Wm. Folsetter closing the enjoyable occasion by considering "Veterinary Colleges."

CORRESPONDENCE.

THE WAY TO DO IT.

MAYAGUEZ, PUERTO RICO, February 4, 1900.

Editors American Veterinary Review:

"Do I sleep? Do I dream?
Do I wonder and doubt?
Are things what they seem?
Or are visions about?"
Is the veterinary college a failure?
Or is the horse doctor played out?

He came from God's country. I don't know if he had a

diploma, but if he had may the Lord in his infinite mercy forgive the mill that gave it to him. Anyhow, he drew a salary, and had full swing to perpetrate his knowledge on several hundred unsuspecting quadrupeds belonging to your Uncle Samivil. He was equal to the occasion, however, and has left a trail behind blazed with an originality and brilliancy that can never be obscured. The department in which he belonged employed several veterinary surgeons (I'm not using caps here) during the last scrap. A few were all right, some of them fair to middling, a number decidedly short, and not a few who were "rank." They were not all heroes, and they were not out in search of the holy Grail, by any manner of means, but more interested in chasing the dollar of the country around the barbed wire fence of an unsanitary corral, while a practice of thousands of dollars a year at home went to the eternal bow-wows. He was one of them, in fact, the king bee of the bunch. In the classic language of Chimmey Fadden, he was a "corker," and could give aces and spades to Pasteurs, Davaines, and Kochs, and then beat them at their own game. Armed with an ordinary twenty-dollar microscope, accompanied with a gall immersion lens, and given plenty of room and a chance to catch his breath occasionally, he could raise more kinds of what used to be called hell before hades was discovered, inside the space of about two minutes, than any one or two men I have ever heard tell of. He was happy in his power, however.

I think it was George Eliot who said (or words to that effect) that the two things necessary to happiness are a good digestion and a large amount of gall, and, as he was far from being a dyspeptic, he certainly must be the happiest individual in this "vale of tears," as the church people put it.

While in the throes of an examination, some few moons since, to determine whether I was a "first-class vet," or but an ordinary horse doctor, glanders was reported to have shown itself in a certain troop of the regiment. He was sent out, and, like Cæsar, he came, he saw, and conquered. He jumped out of the chariot in which he arrived, injected a quantity of mallein, took the temperature immediately after, scraped some of the nasal discharge on to a slide, slipped it into a microscope he had with him, stood the apparatus on the fence, cast his eagle eye along the sights in the manner of Davy Crockett, or Leather Stocking, and awaited results. Of course, under conditions such as these, something must happen, or the cosmos go smash. He roared "glanders" to an awe-struck audience of

troopers, and another life was sacrificed on the altar of science. The farrier and quartermaster-sergeant offered to dine off an uncooked portion of the muscle of the animal, just to prove there was no hard feeling, and at the same time expressed their opinion in this manner, that they did not believe in the glanders diagnosis. A good scheme if it was adopted among disputing practitioners, as it would get some of them off the earth, and they never would be missed, but as it was useless to stack up against science in the shape of a hypodermic syringe, a bottle of mallein, and a microscope, unknown quantities, by the way, in a cavalry regiment in this man's army, they didn't call his hand. The gall immersion attachment had the usually intelligent troop commander bluffed, so the unfortunate equus was immediately gathered to his fathers.

Now, to allay any doubt that might remain in the unscientific minds of the sergeant and farrier as to the correctness of the diagnosis, a portion of the nasal secretion from the prospective cadaver was secured, and a culture made on a piece of raw spud, and the information given that inside of ten days a beautiful colony of microbes would be on exhibition. The farrier, being a man of strong faith, put the now famous potato on a shelf in the saddler's shop and built a roost for the expected Mikes. He naturally expected Mikes to hatch out on an Irish potato. The culture turned out to be a "sisser," and the divil a microbe ever showed up to use the roost, and of course the spud was a dead loss to the troop mess. Some of the members of the organization expected the usual lecture and post-mortem demonstration in such cases, but he had no time to tarry for such foolishness, so he quietly "hit the trail," as we say in the West, and forgot all about the usual sanitary precautions, considered necessary in these cases, so anxious was he to conquer other fields, and other bacteria. 'Twas not until the Mikes failed to come home to roost that the idea commenced to percolate through the dandruff of the troop that they had been up against a gold brick game.

We met another worker in the veterinary Sahara. He had cultivated an oasis all his own; none of your nickel-plated affairs, but a regular rolled gold arrangement for stamping out glanders, warranted to do the business every time, or he didn't want a cent. He was drawing a salary from the Government when he should be gazing steadily at the business end of a mule for ten hours a day for six days of the week, in a cotton patch; he had a "bunch" of glandered horses in a field, isolated from the

healthy ones by a four-wire barbed fence, and was just waiting until he had a good sized "bunch," when he would have a report made and put an end to the whole business p. d. q. The serious part of the affair, however, was that animals were being sent out daily from this corral for use. At another stamping out place the "boss man" told us in cold blood and while every one was perfectly sober and unexcited that he was at the end of his glanders scare, as the last case had been killed eleven days ago, and as nothing had shown up since he knew the disease was at the "end of it's string." He couldn't understand, several days later, when he found out there was still more string.

There was certainly a good field for missionary work among these apostles of science, but it is one of the misfortunes of war that the army at times becomes inoculated with a certain percentage of cranks, who believe that whatever is wrong, and that they are specially raised up by Providence to put it right; they are "agin" any man from any school (?) but their own, and would be so were it personally administered by the Supreme Being. They are envious as eunuchs, and irresponsible as apes; they are all astride some ham-strung medicine hobby, and industriously riding it to the devil; every mother's son of 'em has a panacea for all the ills that horse flesh is heir to, and run the entire gamut from simple bitters to nerve tonics; their heads are full of windmills, with cow bell attachments, ever jangling out of tune; they have picked up a few technical phrases from lecturers evidently as ignorant as themselves, and these they reiterate with the stupid persistence of a poll parrot discoursing of crackers; they break into the army by some hook or crook, and succeed in making a laughing stock of good men and holding down the profession like a devil fish with his lunch hooks unlimbered.

This way of doing it cannot live forever; truth will at last rise triumphant. She is a long time getting her wings, but when they do spread may they be all powerful. While waiting we are inclined to say with John Boyle O'Reilly:

"I am tired of the show and seeming
Of that life that is half a lie.
Of the faces filled with scheming
In the ('fakes') that hurry by."

GERALD E. GRIFFIN, *Vet. 5th Cavalry, U. S. Army.*

AT the final examinations of the New York-American Veterinary College last month, eleven gentlemen were recommended to the Council of the University for graduation.

SUCCESS WITH THE SCHMIDT TREATMENT.

NASHVILLE, ILL., March 3, 1900.

Editors American Veterinary Review:

DEAR SIRs:—As there has been a great deal said *pro* and *con.* in regard to this mode of treatment for parturient fever, I will give my experience with it.

I have had quite a good opportunity to demonstrate the merits of it, and I find it the most reliable remedy that I have ever used. I have treated a good many cases this past year. I had four cases the last month—a fine Jersey the last day of February—and can proudly say that I have not lost a case since I adopted this treatment, and have had every patient upon her feet inside of six hours, excepting two, and they were the only ones I gave the second treatment to, and they were up and eating inside of twelve hours.

I give fluid extract of *nux vomica* in addition, and bathe the whole spinal column with a strong penetrating liniment, and keep dry and warm, and see that the bowels and kidneys are working properly. My patrons are astonished at the rapidity of the recoveries.

Let more of our brothers that are located in the country and dairy districts be heard from on this subject.

C. W. McCracken.

THE ETIOLOGY OF PARTURIENT APOPLEXY.

LINCOLN, NEB., March 23, 1900.

Editors American Veterinary Review:

DEAR SIRs:—I have another good specimen of brain taken from a cow dying from apoplexy. There was meningeal congestion, considerable cedema about the brain, a large clot under the medulla and anterior portion of the cord.

The case came into the hands of Dr. Tucker, who was called to see the animal early in the morning. He states that she died before he had an opportunity to give a dose of medicine.

The doctor called me to aid in making the post-mortem.

W. A. THOMAS, B. V. M.

SOCIETY MEETINGS.

MISSOURI VALLEY VETERINARY MEDICAL ASSOCIATION.

(Continued from Vol. XXIII, Page 916.)

Dr. A. T. Peters, of Nebraska, then addressed the meeting as follows:

"I thank you, Mr. President and gentlemen, for the kind invitation to speak to you on such a broad and interesting subject as that of meat inspection, and will, therefore, try to say a few words on this vast subject. There is probably no one more qualified to point out its virtues and its faults than this honorable body gathered here to-night; but if you will bear with me I will compare our system of meat inspection with that of Europe, and especially Germany, which I happen to know something about, and also state the rapid improvement that has been made in recent years in this country in this line.

"Meat inspection in this country has only a very recent history, but one that we can be proud of. In the older countries of Europe, meat inspection has been in vogue for a long time, but it is only in the last fifteen years that it has received a thorough reorganization all over the world. In reality it first took a steady boom in the old country when pathology became established on a more thorough basis, and with our increased knowledge of contagious and infectious diseases, it became more defined; for instance, the disease, tuberculosis, in years gone by was diagnosed as many different diseases, and it took many years to clearly demonstrate its infectiousness. Any one who is especially interested in meat inspection and especially in pathology would be surprised to read the history of tuberculosis and to see in what a state of affairs pathology was before this disease was thoroughly demonstrated. We owe this to Robert Koch, who demonstrated the infection beyond a doubt. But before Koch, it was our veterinary profession that pointed out very clearly the infectiousness of tuberculosis. It took a man with a great deal of courage and personality to defy the medical men of that age, and to draw attention to their mistaken methods of investigation. This man was Professor Gerlach, who is well known to all of us. He was the first one to draw attention to the fact that tuberculosis is a distinct infectious disease; and later, Dr. Robert Koch proved beyond the shadow of a doubt that tuberculosis is produced by a bacterium; and after thoroughly demonstrating this on many hundreds of animals it still took time for such men as Virchow to classify the many diseases which were confounded with tuberculosis; and during this time the rapid strides that were made in the perfection of the microscope and in the technique of bacteriology aided our profession to thoroughly become guardians of the public health.

"The inspection of meat is such a large subject and one of

such great importance that any one who is connected with the performance of this duty may certainly be called a benefactor to the community. I will admit that it has not been established very long, but when we consider how short a period meat inspection has been in vogue in this country the success is gratifying; for it is only a short time ago that positions which are now held by the most qualified men were in the hands of politicians, who were ridiculed by all scientific men. It is surprising to those who have observed the short space of time in which inspection of meat has outgrown the prejudice of the people,—for we can certainly say that since the civil service has been established these very important positions are held by the best men in the country; and probably there is no branch of the veterinary profession which has made such rapid progress, and which has been so appreciated by the people as this one branch. It would certainly be interesting to many people to know how this large organization of men are systematically working and accomplishing so much good to the country, both from an economical and sanitary standpoint. I have omitted the statistical data, which can be found in the Yearbook of the U. S. Department of Agriculture for 1898, which exhibits interesting data on this subject. I can safely say, without any malice toward the European inspectors, that they are not as well organized, nor could they perform the vast amount of work that is being performed by our inspectors in this country. We read to-day a great deal about meat inspection and especially from European sources, but allow me to tell you that it must be admitted—and would be privately admitted by the best men in Europe—that our corps of inspection is as efficient, and our system of inspection as perfect, as any in the world. With the system that prevails in Europe we could never in this busy country of ours complete the examination of the hundreds of thousands of animals that are being inspected. We must certainly admit that they have some very prominent men in this branch of work: such men as Ostertag, Simmons, Long, Fischöeder, and ever so many others. In Europe each province, district and locality has supervision over its own inspectors, and the chief is not directly responsible for his subordinates. The entire corps of inspectors—no matter if they are engaged in an abattoir in the southern part of Germany or in the northern part of Prussia, are only responsible to their community and not responsible to the Federal government. For this reason they have special periodicals on municipal meat inspection which

are wholly supported by inspectors of the different abattoirs, who contribute papers of various kinds. This is not the case in this country. The meat inspectors are responsible to the chiefs of the federal government, and for this reason they have not published as many scientific papers on the disease found on the floors of the abattoirs. These things probably could be remedied by a journal in the English language similar to that published by Professor Ostertag, giving short descriptions of some of the rare cases seen on the floors of the abattoirs: in this way keeping the interest of the inspectors alive. But I suppose this is not at all practical under the present system; but some method should be adopted by the federal government of stimulating interest in writing up the rare cases found by the inspectors; and I believe there is no better way than to have either a separate organ for this purpose or space in some of the journals that are now in existence exclusively for the use of meat inspectors, and in which the social feature as well as the professional may be represented.

"In conclusion, I may say that the most severe test that meat inspection has been put to was probably that during our late war with Spain, when the newspapers contained so many editorials on this subject. All that can be said is that it stood the test, and that those who were inclined to ridicule our methods of inspection must admit that it is as good as any country can produce; and in closing I wish to say to those members who are engaged in this profession that with their zealous efforts it can be brought up to a standard that will be far superior to that of any other country."

At the conclusion of Dr. Peters' paper it was suggested that its discussion be postponed to a later meeting, but Dr. Peters demurring, Dr. Forbes led the discussion as follows:

Dr. Forbes: I must say that Dr. Peters has treated the subject in a manner far different from what I had anticipated. What he said in regard to the meat inspection service of this country is certainly very flattering, indeed, to that service. During the last five or six years I think that the system of inspection as carried on by the Bureau of Animal Industry has come to be an almost complete system, and will compare favorably with that of any other country in the world. A great deal has been said about the scientific manner in which meat inspection is carried on in Germany, but we learn from Dr. Peters' remarks to-night that our system will compare favorably with that in vogue in Germany. I fully believe that the efforts put

forth by those in authority in regard to this inspection will ultimately result in a system complete and perfect in every detail, when the mark of the United States government will be a sufficient guarantee to any country in the world as to the purity and wholesomeness of its meat products.

Dr. Stewart: Permit me to say that Dr. Peters prepared this paper at my suggestion. I had received a communication from the Secretary, Dr. Kelly, stating that there was rather a dearth of papers, and it occurred to me that we could possibly prevail upon Dr. Peters to attend our meeting and prepare a paper for this occasion. I suggested that the paper discuss the views of the people in general, and of those veterinarians who are not in the service, as to the value and quality of the inspection as conducted by the federal inspectors. That was my idea, rather than comparison with foreign inspection. I think it is beneficial to us "to see oursel's as ithers see us." I thought it would be more or less interesting to the members of the inspecting corps here to know how the people in Lincoln, where they have but a small abattoir and get most of their meat from South Omaha, look upon the subject of inspection. Dr. Peters travels over the State of Nebraska extensively, and is in touch with other parts of the country, and is certainly in position to learn the views of the people generally. However, I would say that he has prepared a paper which is probably more interesting than would be one prepared upon the basis I have indicated. It is gratifying to learn that our inspection bears so favorable a comparison with that of Germany. I am indebted to Dr. Peters for the information that the inspection in that country is not federal, but local. It would certainly seem that where it is under so many authorities it could scarcely be uniform throughout the empire of Germany. It may possibly be extra good in some points and very poor in others, and explains the blunders that have been made, especially in the microscopic work, where they have rural as well as municipal inspection. A layman, or man having been but partially instructed in the use of the microscope, is delegated to do rural inspection. His attention is called to the fact that a farmer wants to slaughter a hog and consume it for his own use, and gives a permit for him to do so. The farmer and his friends kill the animal and consume the meat sometimes before the inspection is completed. An outbreak of trichinosis occurs, an investigation is made, and it is found they have been eating pork that has not been inspected, or if so has been imperfectly inspected and passed. Relative to

that side of the subject which I had in mind, I wish to allude to a circumstance which occurred in Kansas City perhaps a little more than a year ago. One of the abattoirs in that city was reported in the public press to the effect that the grand jury had found that one of its employees had endeavored to bribe some of the government inspectors to pass condemned meat and the publication of that article engendered a feeling among the consumers of meat in the surrounding country which made them averse to buying the products of that abattoir. Meats shipped out to towns in the surrounding country were returned with the statement that there was a feeling that that firm was desirous of, if it did not actually engage in shipping out meats that would not bear inspection. That was an indication of the feeling in the region about Kansas City in regard to inspection. Of course it needed something of that kind to bring out an expression of sentiment. The inspection certainly is growing in effectiveness, and since hearing this paper I feel much encouraged in regard to it. Dr. Peters has certainly looked upon it with a kindly eye, but I have no doubt whatever that he has drawn a fair comparison, and I believe the publication of that paper will impress our veterinary readers very much in favor of American inspection. Those who have given the matter little attention are oftentimes inclined to look upon the force as a lot of men with government jobs and that it is just a place for a lot of politicians to put their friends. I believe the publication of this paper in our periodicals might be extended to the lay press. For instance, if the veterinarians of this city would take such an article to their papers and request them to publish it as an extract from the VETERINARY REVIEW, or the *Journal*, whichever it may be published in, and the same method followed in other cities, it would in this manner secure an extensive publication. If in St. Joseph, it is deemed desirable to cultivate public sentiment along that line, a continual supply of just this sort of articles to your daily press will after a time bring forth substantial fruit in the way of inspection, and is one of the surest and best methods to reach that goal.

Dr. Peters: If I had been near Dr. Stewart at the time he suggested this paper I would have written it somewhat differently. I am very sorry I did not know just what he wanted, but I would beg leave now to say a few words to the subject he has suggested. I think the value of meat inspection in this country was never more clearly demonstrated than during the controversy over the meat supplied to the army during the late

unpleasantness. I travel on an average over a thousand miles a month in the State of Nebraska, and if I was accosted once I was a dozen times during the time to which I have alluded, and I was pleased to see the people defend the federal government. They never believed the accusations which the press made against the federal inspectors. When in 1894 I took the position I now hold, it was a common thing to hear such a remark as "Oh, such and such an animal will pass all right." You don't hear any more of that. The people of the State of Nebraska, at least, have come to the conclusion that they are not going to be cheated, but, on the contrary, they are going to be protected. They were probably, as Dr. Stewart intimated, skeptical at the beginning, and insinuations were made as to the ease with which the inspectors might be bribed. True, an inspector may be bribed occasionally. We cannot help that; but the people have found that the federal government has a check on such things as that, and it can soon be located and rectified. I can assure any one who is connected with the meat inspection that he may be proud he is in the service. It is superfluous to say that many things might be suggested, which, if adopted would benefit the service; but it must be remembered that meat inspection has been in vogue in this country but a short time, comparatively, and when one has had an opportunity of personally comparing the efficiency of the systems in other countries with that of our own, I think the conclusion that we have a superior system unavoidable. You gentlemen here read the extracts from Ostertag and other authorities, and you read the comments in our journals; but there are hundreds of men, in the southern part of Germany especially, who have never graduated, but who are appointed, and who supervise the killing of animals, and inspect the meat, and in Ostertag's book you will notice that a great many times it says an animal had to be killed, say in a case of choke. The layman quacks will say it is liable to die, and they will kill it and that meat is used for food, and so with very many other diseases.

Dr. Moore: Dr. Peters' remarks suggest a thought upon which I would like to ask for information. It is a common thing in this country to run across German practitioners, who claim to have been practitioners under the German government, whom we know from their work and from what we can see and learn of them, are not qualified men, and I would like to ask if it is a fact that the German government does employ such men.

Dr. Peters: They are employed as inspectors, but not by

the government. Take the state of Wittenberg for example. Parties in that state occupying public positions similar to county commissioners here, appoint Mr. So-and-so an inspector, and he may inspect for trichinae only. In Prussia it is necessary to receive instruction for twelve weeks (I think that is the period) at an abbatoir and an examination passed, before they are allowed to practice inspection, but he is supposed to call in a veterinarian whenever he thinks that it is a contagious disease, but these people, in a great many instances, think they know more than the veterinarians (usually quacks do), and take upon themselves too much responsibility. In the German army and other government positions, they are absolutely qualified men.

Dr. Moore : Another question : Dr. Peters states that it is the common practice of the empiric when he is called and finds a case of choke, for instance, which he thinks is going to prove fatal, and in which he advises the destruction of the animal and its use as food. I would-like to know if in such a case any inspection is made by other authorities.

Dr. Peters : Not if he is present before the animal is killed.

Dr. Stewart : I find in Zuill's Friedberger & Fröhner's book a statement relative to diseases of food animals, that in many of the diseased conditions which are likely to destroy life, which are not amenable to treatment, they recommend the destruction of the animal and the use of the carcass for food purposes. For instance, if a cow was suffering from paresis, milk fever, or was paralyzed, we may say moribund—would recommend that it be killed, dressed and used for food. If a cow were suffering from traumatic pericarditis, in which the pericardial inflammation was of a purulent character, yet the animal was not quite dead, perhaps about to die, certainly could not be relieved by treatment—recommend that the animal be slaughtered and the flesh used for food. And so in many other cases in which, in this country, the flesh would be condemned as unfit for food. Viewed from this standpoint American inspection is certainly much superior to German or French inspection. Animals are so abundant in this country, and the price of flesh so low, comparatively, that public sentiment demands its absolute freedom from disease, and would, I believe, often transcend the zeal of the inspector, and reject what he passes, because their sentiment is not always founded upon knowledge. I do not know to what extent inspectors generally are governed or influenced by sentiment, but I know that with some it is a potent factor. If they would not like to eat the

meat themselves they would not like anybody else to eat it. Under the circumstance of the cheapness and abundance of meat in this country, it seems to me that such a sentiment should be given some play.

Dr. Forbes : I do not know anything about the system of meat inspection in Germany, but I have had a little experience with it as it is carried on in the city of Glasgow, Scotland, and know of my own personal knowledge that it is quite a common thing for veterinary surgeons when called in cases of parturition not amenable to treatment, immediately upon arriving at this conclusion they advised the owner to slaughter it and send it into the city for food. The inspector there is a policeman, who acts under the medical health officer, and not one-fourth of them know a diseased condition when they see it. In a case of parturition my employer and myself, after working several hours in a futile endeavor to relieve the cow, decided that we could do nothing further for her. She was on the point of collapse. The owner was so informed, and he decided to kill the animal, which was done, the carcass transported to the city and there placed on the market. So that the more we learn of others the more reason we have to be satisfied with American inspection.

Dr. Goode : Dr. Stewart's remarks remind me of one or two cases that came under my own observation in the city of Chattanooga, Tenn. In one case a very fat steer was brought in suffering with what afterwards proved to be actinomycosis. The matter was noised about in some way, and the captain of police was there and a crowd had congregated around, and the stockyards men telephoned to me to come down and see it. Before I got there the animal had been killed, but not bled. It was thrown away at a loss of fifty dollars. They said that even if it was all right they were opposed to using it for fear something would be said about it and it would damage their business. I said, "you could afford to use it on my say so, couldn't you?" They said no, they did not care to risk it. In another case, I was called to treat a cow in a case of chronic prolapsus of the rectum. One night it came out and we could not get it back. The cow was two months after calving and was fat, and I advised the owner to slaughter her for beef, but he said he didn't want to do it. I placed an ecraseur around the mass and cut it off and the cow died from the shock, and he lost the value of the cow. These are two cases I know of where the owner incurred a loss just from fear of public opinion.

Dr. Moore : I think we ought to move a vote of thanks to the people of that community.

Dr. Goode : The general impression seemed to be that if they had an inspector it would cause them all kinds of unnecessary laws. They were afraid of it, and if anyone is working up that kind of thing I think it would be a good idea in some cases at least if they would pass animals that they would expect to have debarred.

JOHN B. WRIGHT, *Secretary*.

THE WISCONSIN SOCIETY OF VETERINARY GRADUATES.

The semi-annual meeting was held at the Kirby House, Milwaukee, September 13, 1899. The meeting was called to order by the President, Dr. Roberts, at 2 P. M. in the parlors of the Kirby House. Present: Drs. H. Arpke, W. G. Clark, C. Evans, E. R. Flack, C. H. Ormond, R. Kuoni, G. Ed. Leech, E. L. Morgenroth, E. H. Newton, J. F. Roub, D. Roberts, S. S. Snyder and L. A. Wright. Visitors: G. W. Butler, Milwaukee; E. A. Manual, Des Plaines, Ill.; A. R. Wake, Cudahy; Jos. Pfeiffer, Sheboygan; W. E. A. Wyman, Milwaukee; Wm. Voss, Kiel; H. F. Eckert, Markesan; P. J. Wilkinson, Oconomowoc; S. J. Collins, Reedsburg, and E. A. McCullough, Delevan.

The minutes of the last meeting were read and approved.

The following applications for membership were received: Drs. W. E. A. Wyman, Wm. Voss, H. F. Eckert, P. J. Wilkinson and S. J. Collins. In the absence of the censors, the President appointed as a committee to examine the applications Drs. Roub, Clark and Ormond. A recess was taken until the committee reported on the applications. After the meeting was called to order the committee reported favorably on the applications. On motion the candidates were voted in by acclamation. The vote was taken and the several gentlemen were declared elected members of the society.

Dr. Leech reported on behalf of the Committee on Legislation in regard to the law passed at the last session of the legislature. The question of prosecutions of non-graduates under the new law was discussed by Drs. Leech, Roub, Ormond, Flack, Wright and Roberts.

Dr. Hartwig, not being present, his paper on "Parturient Apoplexy"* was read by the Secretary. Discussed by Drs.

* Will be published in an early number.

Wright, Roub, Wyman, Clark, Flack, Arpke, Collins, Morgenroth, Kuoni and Snyder.

On motion the society adjourned to meet at 8 P. M.

Evening Session.—The meeting was called to order by the President at 8 P. M. In addition to those present at the afternoon session, were B. A. I. Inspectors Drs. A. E. Behnke, H. Caldwell, W. J. Stewart and R. H. Harrison. Several of the leading horseshoers of the city were also present.

The meeting was opened under the head of applications for membership, and the application of Dr. E. A. McCullough was received, which being reported on favorably by the censors, it was balloted on and Dr. McCullough was declared elected to membership.

Dr. L. A. Wright read a very able paper on the "Workings of Heredity." Discussed by Drs. Roub, Schmitt, Leech, Flack, Wyman and Butler. On motion the discussion was closed and the essayist excused.

Dr. E. L. Morgenroth gave a short talk on shoeing and exhibited several shoes. Discussed by Drs. Arpke, Schmitt, Roub, Wright and Leech, also by Messrs. Widemeyer and Dorman, who gave us some very good ideas in regard to shoeing.

On motion the discussion was closed and the essayist excused. On motion the society adjourned to meet in Madison subject to the call of the President and Secretary.

Thursday morning at 8.30 the society met at Dr. W. E. A. Wyman's hospital. Dr. J. F. Roub performed a skillful and successful operation on a ridgling and explained his method of operating. Dr. Wyman performed cunean tenectomy for bone spavin:

The annual meeting of the Society of Veterinary Graduates was held in Madison, March 14th, at the Hotel Van Etta, and was called to order by the President, Dr. D. Roberts, at two o'clock P. M. Present: Drs. B. L. Clark, W. G. Clark, A. H. Hartwig, R. S. Heer, S. S. Snyder, G. Ed Leech, D. Roberts, E. D. Roberts and Chas. Schmitt. Visitors: Drs. Simon Beattie, Madison; and Walter Pick, Lodi.

The minutes of the last meeting were read and approved, and the Secretary's report of accounts was read and accepted. The Treasurer's report was read and accepted.

Dr. Hartwig brought up the subject of prosecutions under the new law, which was discussed by Drs. Leech, Heer and Schmitt.

Under the head of new business a communication from Dr.

W. E. A. Wyman tendering his resignation from the society was read and discussed by Drs. Leech, Schmitt, Clark, Snyder and Hartwig. On motion, Dr. Wyman's resignation was accepted.

On motion, the Secretary was instructed to retain Dr. Wyman's certificate of membership and return his membership fee. It was moved by Dr. Leech and seconded by Dr. Hartwig that the President and Secretary be empowered as a committee to restrict Dr. Wyman from using the society or the society's interests in any way to further his personal interests, and that the President and Secretary be given the power of attorney to prosecute the case if necessary. Carried.

The applications of Dr. S. Beattie and W. R. Pick, being reported on favorably by the censors, were ballotted on and declared elected to membership.

The Secretary was requested to read Section VII of the Code of Ethics in regard to live stock insurance companies. The Secretary then read a report of the financial condition of the Badger Mutual Live Stock Insurance Co., of Milwaukee. Discussed by Drs. Leech, Hartwig, Clark and Schmitt. Moved by Dr. Leech, and seconded by Dr. Heer, that the Secretary forward to all members of the society not present a marked copy of the Constitution and By-laws.

On motion, the society proceeded to the election of officers. Moved and seconded that the election be by *viva voce* vote. Carried.

The election resulted as follows:—

President—A. H. Hartwig, Watertown.

Vice-President—J. F. Roub, Monroe.

Secretary—W. G. Clark, Marinette.

Treasurer—S. S. Snyder, Cedarburg.

Censors—H. P. Clute, Marinette; R. S. Heer, Platteville; B. L. Clark, Monticello.

On motion it was decided to hold the semi-annual meeting at Milwaukee in the month of September.

On motion, Drs. Ormond, Leech and D. Roberts were appointed a committee to make arrangements for the semi-annual meeting.

On motion, the society adjourned to meet at eight o'clock.

Evening Session.—Meeting called to order at 8.30 by the President, Dr. A. H. Hartwig.

The first subject on the programme was a paper on "Periodic Ophthalmia," * by Dr. G. Ed. Leech, Milwaukee. It

* Will be published in an early issue.

was carefully prepared and presented the latest researches in both human and veterinary pathology in regard to this disease. Discussed by Drs. E. D. Roberts, Hartwig, Schmitt and D. Roberts.

On motion, the discussion was closed and a vote of thanks tendered the essayist.

In the absence of Dr. Wyman, his paper on "Meso and Double Peroneal Neurectomy" was read by the Secretary. In the absence of Dr. Wyman the paper was not discussed.

Drs. Leech, Heer, and E. D. Roberts discussed "neurectomy."

The use of eserine sulphate, barium chloride, etc., were quite fully discussed. Dr. Leech recommended oil of eucalyptus in drachm doses hypodermically or orally for intestinal flatulence.

The use of potassium iodide in the treatment of azoturia was discussed by Dr. D. Roberts, who reported favorable results when combined with sodium bicarbonate. Drs. Leech, Heer and Hartwig reported unfavorable results from the treatment.

On motion, the society adjourned to meet at Dr. Beattie's hospital for clinics at 8.30 the next morning.

Clinics.—Dr. Beattie presented a case that had shown difficulty in respiration, gradually increasing for a year or more. On examination the horse was found to have suffered a fracture of the nasal bone. This case was not operated on as the weather was very cold.

Dr. D. Roberts performed ovariectomy on a bitch, and did the operation very quickly and neatly.

Dr. H. P. Clute gave a demonstration in veterinary dentistry, after which the society adjourned to meet in Milwaukee next September.

W. G. CLARK, M. D. C., *Secretary*.

GENESEE VALLEY VETERINARY MEDICAL ASSOCIATION.

The January meeting was held at the Hotel Livingston, Rochester, N. Y., Jan. 25th, 1900.

Vice-President W. G. Dodds in the chair. The following responded to roll-call: T. S. Rich, D. B. French, E. Knight, L. R. Webber, A. G. Tegg, W. G. Dodds, J. H. Taylor, A. Y. Earl, N. N. Lefler, J. C. McKenzie, L. J. Palmer, A. McConnell, P. J. Johnson, G. C. Kesler, D. P. Webster, Wm. Hunter, W. E. Stocking and W. J. Payne.

Reports of officers showed association to be in a flourishing condition.

Dr. J. E. Smith, of Webster, N. Y., was elected to membership.

The following ten members were elected on the Board of Directors and also as officers for the ensuing year: President, W. G. Dodds; Vice-President, T. S. Rich; Secretary, E. Knight; Treasurer, L. R. Webber. Board of Censors—D. B. French, G. C. Kesler, L. J. Palmer, W. E. Stocking, A. G. Tegg and A. McConnell.

Suitable resolutions were drafted on the death of our late President, Dr. Albert Drinkwater.

The importation of tuberculous cattle into the State was discussed, which resulted in the framing of the following resolutions:

WHEREAS, Tuberculosis has and is increasing to an alarming extent among cattle in Western New York, thus causing extensive loss of cattle, and endangering the public health, and as most of these cases are in cattle imported from adjoining states or traceable to infection from such cases, be it

Resolved: That we, the members of the Genesee Valley Veterinary Medical Association, urgently call for the enactment of such laws as will give us protection, and prevent this state from being made the dumping ground for diseased animals that cannot be sold in adjoining states where they have laws preventing the importation of such diseased animals.

And that we urge each member of this Association to call upon his representative in Assembly and Senate to urge the passage of such laws.

The Secretary was instructed to have printed copies of the above resolutions forwarded to each member, that he in turn may send them to his State Assemblyman and Senator with an accompanying letter asking for their aid and support in procuring the necessary and proper legislation.

The following gentlemen read papers: Dr. A. Y. Earl, of Palmyra, "Soft Cancer in the Cow"; Dr. A. G. Tegg, "Inflammation"; Dr. L. R. Webber, "Purpura"; Dr. A. McConnell, of Brockport, "Hog Cholera"; Dr. N. N. Lefler, "Osteo-Sarcoma on Jaw of Horse."

The following were appointed by the President to prepare and read papers at the July, 1900, meeting: Drs. Rich, Lefler, Johnson, A. Tegg, Webster and McKenzie, in conjunction with those failing to prepare papers for this meeting.

After holding a clinic at the stable of one of the city members, the meeting adjourned.

EMIL KNIGHT, V. M. D., *Secretary.*

VETERINARY MEDICAL SOCIETY, UNIVERSITY OF PENNSYLVANIA.

Meeting called to order, October 20th, 1899, by Secretary Nolan. Mr. Bender was appointed Secretary *pro tem*. Mr. Young was appointed critic. It was carried to dispense with the regular order of business and to proceed with the proposal and election of new members, as follows: Messrs. Weitzel, Burrows, Bigelow, McClintock, Nicholas, Zollinger, Rothermel, Cole, Glass, Paget, Feigenbaum and McCloskey. The election of officers resulted as follows: President, Mr. Nolan, '00; Vice-President, Mr. Young, '00; Secretary, Mr. Bender, '01; Treasurer, Mr. Davison, '00; Librarian, Mr. Hayman, '01. Executive Committee.—Mr. Powell, '00; Mr. Carlisle, '01; Mr. Shore, '01; Mr. McCloskey, '02. The critic had no report to make. Adjourned at 9.30 P. M.

Meeting was called to order Nov. 3, at 8 P. M. Mr. Horner was appointed critic. Carried, that the names of persons no longer in attendance at this school, and whose names are still on our roll, be stricken off the roll. Dr. Adams then addressed the meeting on "The Method of Fitting Bits in a Horse's Mouth." Dr. Adams made his lecture very interesting by the way in which he described the various forms of bits and the positions they should occupy in the mouth. A vote of thanks was extended to Dr. Adams. The critic had no report to make. Adjourned at 9.15 P. M.

Meeting called to order Nov. 17, at 8 P. M. Mr. Mayer was appointed critic. The chair appointed the following members to serve as the Room Committee: Messrs. Hughes, '01, Bassler, '01, and Paget, '02.

Carried, that the librarian be authorized to determine cost of having 100 copies of the Constitution and By-Laws of the Society printed.

Mr. Cornman then read a paper entitled "Ectopia Cordis," which was very interesting. He also had on hand a specimen which showed it very nicely. A vote of thanks was extended to Mr. Cornman. Critic had no report to make. Adjourned at 9.15 P. M.

Meeting called to order Nov. 24, at 8 o'clock P. M. Mr. Tallman was appointed critic. Carried, to dispense with the regular order of business.

Mr. Young then read an excellently prepared paper on "Irregularities of the Dental Apparatus."

Dr. Pearson then addressed us on "Horse Breeding." He gave an elegant address, and showed us photographs of the various breeds of horses of which he spoke.

A vote of thanks was extended to Dr. Pearson and also to Mr. Young.

The chair appointed the following committee on banquet: Messrs. Cornman, Carlisle and McCloskey.

The Treasurer's report stated the financial condition of the society was very encouraging.

The critic's report was very favorable. Adjourned at 9.30 P. M.

Meeting called to order Dec 8, at 7.15 P. M. Mr. Cornman was appointed critic. Carried, to renew our subscription for the *Pennsylvanian*.

The librarian was authorized to look into the matter of having the papers brought into the reading room, and also to report what was being done in regard to printing the By-Laws. The supper committee reported that they had selected the Hotel Aberdeen for the banquet. Carried, that the banquet be held December 16th, at 9 o'clock P. M.

It was also carried, that the Secretary invite by letter the three clinical professors and also the resident surgeon.

Mr. Van Sant was elected to membership. The critic's report was favorable. Adjourned at 8.30 P. M.

The third annual banquet of the Society was held on the evening of December 16th, at the Hotel Aberdeen. There was a large attendance and the evening was very pleasantly spent; at a seasonable hour an elegant supper was spread, which was greatly enjoyed by all.

The affair was voted by all present to be a great success.

HARRY E. BENDER, *Secretary*.

THE VETERINARY ASSOCIATION OF MANITOBA.

The annual meeting of this association was held in the city of Winnipeg, February 20th, the President, Dr. H. D. Smith, in the chair. A large and representative gathering of members from all parts of the province made this one of the best meetings the association has ever held. The auditors reported the financial affairs in first rate condition, and the Secretary showed that the membership now amounted to sixty-eight, the largest in the history of the organization.

Several interesting papers were read. Mr. W. Swenerton, of Carberry, reported a case of equine tuberculosis, which pre-

sented many interesting features. In the discussion which followed, Dr. Martin stated the facts relating to a similar case in his own practice, where the evidence of infection from tuberculous cows was very strong, the horse in question belonging to a dairyman, who stabled the animal with his cows.

Mr. J. A. Stevenson then read a most interesting essay on "Hog Cholera," a disease which is fortunately almost unknown in this province. The last outbreak was about the year 1884, and up till the present the province was free from it. Owing to stringent measures now in force, the present outbreak was confined to a few farms in the vicinity of Carman, and he had every reason to think it would be successfully stamped out.

This was followed by an essay on "Tuberculosis," by Mr. W. H. Lake, of Miami, which in the absence of the essayist, was read by the Secretary.

A motion of condolence upon the death of our late Vice-President, J. Spiers, of Virden, was passed, and the Secretary instructed to forward a copy to Mrs. Spiers.

The following gentlemen were elected officers for the ensuing year: President, J. G. Rutherford, M. P., of Portage la Prairie; Vice-President, J. F. Fisher, V. S., Brandon; Secretary-Treasurer and Registrar, F. Torrance, D. V. S., Winnipeg. Councillors: W. A. Dunbar, V. S., W. R. Taylor, V. S., W. E. Martin, V. S., and A. E. Williamson, V. S. The examiners are Messrs. Dunbar, Martin and Torrance.

F. TORRANCE, D. V. S., *Secretary*.

MAINE VETERINARY MEDICAL ASSOCIATION.

The regular annual meeting was held at Hotel North Augusta, Wednesday, Jan. 10th, at 7.30 P. M.

A small number of members were present. The minutes of the previous meeting were read and accepted.

Dr. A. Joly, for the committee on clinics, reported that all the cases operated on at the meeting in October were successful except one case of spavin, which was cauterized.

Election of officers resulted as follows:—Dr. A. Joly, Waterville, President; Dr. C. L. Blakely, Augusta, Vice-President; Dr. I. L. Salley was reelected Secretary, but declined to serve, and Dr. F. E. Freeman, of Rockland, was elected. Dr. I. L. Salley was elected Treasurer. Drs. Russel, Murch and Cleaves were appointed Executive Committee.

Dr. Blakely reported a case of angioleucitis. Dr. Salley re-

ported a case of purpura hæmorrhagica, followed by trismus, to that extent that the patient was unable to eat much but slops, and is in this condition at the present time. Considerable discussion followed the report of these cases.

Drs. Russel and Murch were appointed to read papers at the next meeting.

Voted to adjourn to meet at Bangor in April.

I. L. SALLEY, *Secretary*.

NEWS AND ITEMS.

WILLIAM DUGUID, F.R.C.V.S., a former professor and vice-president of the Royal Coll. of Veterinary Surgeons, died Jan. 16.

DR. J. S. MCCLURE, of Oxford, Pa., has received the appointment of Assistant State Veterinarian of Montana.

A FEW DROPS OF CAMPHOR in water used as an enema will promptly evacuate the bowels.

TINCTURE OF IODINE applied daily for three days, has caused the disappearance of hemorrhoids.

VETERINARIAN JAMES A. MARSHALL, of Philadelphia, has been elected Vice-President of the Turf Club.

DR. R. C. MOORE served as official veterinarian for the annual bench show held by the Kansas City Kennel Club, March 14 to 17.

DR. G. W. POPE, of Boston, has been placed in charge of the Garfield Station, New Jersey, to succeed Dr. W. B. E. Miller, transferred to Philadelphia.

THE automobile does not find Kansas City an inviting field of usefulness. As yet but two have climbed its hills to excite the curiosity of the public. Their appearance was transitory.

DR. WM. FOLSETTER, of Dallas, Texas, and Dr. W. A. Knight, of Houston, Texas, took a postgraduate course at the Kansas City Veterinary College during January and February.

THE KANSAS CITY DOG SHOW, held the middle of last month, was a great success, both in number and quality of entries and in attendance.

DR. WILLIAM A. RUSHWORTH, of the B. A. I. force at Buffalo, N. Y., has resigned his position to accept the assistant managership of the Pasteur Vaccine Co., at Chicago, Ill.

DR. A. F. MARTINS, recently microscopist of the B. A. I. force of Boston, has been ordered to Buffalo, N. Y., for similar duties, vice Chas. Bullard, who has accepted the position of assistant botanist at Harvard College.

DR. WILL. H. DERR (Ont., '93), of Mansfield, O., was recently united in marriage to Miss Elizabeth Tulloss of that city. Dr. and Mrs. Derr will be at home to their friends on E. Fourth St., after April 1st.

W. R. FLEMING, D. V. S., recently of Troy, N. Y., has been appointed upon the meat inspection force of the B. A. I., and assigned to duty at Omaha, Neb.

DR. SPAAK, of Brussels, has obtained excellent hemostatic results from a mixture of two parts chloroform with one hundred parts of water. This mixture is said to rapidly arrest bleeding after tooth extraction.

MAUD S., ex-queen of the American trotting turf, died of heart trouble on March 16. A veterinarian called to see her three days prior diagnosed the condition, and had it confirmed by sudden collapse, though we have not heard the result of the autopsy.

THE KANSAS LIVE STOCK SANITARY BOARD now requires that all cattle shipped into Kansas for breeding purposes be accompanied by certificates of health. The certificates must show freedom from tuberculosis, demonstrated by the tuberculin test.

JAMES FRASER, M. R. C. V. S., a native of Canada, has been elected President of the Royal College of Veterinary Surgeons of England. He was born in Canada, began his professional education at Montreal and completed them in Edinburgh. He is the first colonist to achieve that high honor.

THE CARABAO, or water-buffalo, is being used now by the United States army in the Philippines. It is a very powerful but slow animal, but is of good use during the rainy season. Our soldiers have named the carabao "amphibia" from its persistency in taking a bath when crossing a river, and this without regard to the occupant of the cart it draws.

FLYING FOX, the unbeaten English thoroughbred, brought \$188,000 at auction in February, being purchased by a son of the founder of Monte Carlo, M. Blanc. This beats all previous records for price, the former figure being \$150,000 for Ormonde, who was bought by Macdonough, of California. Ormonde is grandsire to Flying Fox.

KANSAS CITY MEAT INSPECTION.—The following named veterinarians are employees in the Federal Meat Inspection Service at Kansas City: S. E. Bennett, H. B. Adair, J. S. Buckley, T. W. Carnahan, H. B. Chaney, W. R. Cooper, C. H. Davies, H. H. George, J. S. Groves, D. C. Hanawalt, Raymond Johnson, B. F. Kaupp, P. I. Kershner, R. G. Lawton, Albert Long,

F. C. McCurdy, Louis Metsker, M. B. Miller, W. N. Neill, J. L. Otterman, S. Stewart, A. W. Swedberg.

CORRECTION.—A. W. Baker, V. S., Brasher Falls, N. Y., writes under date of March 23: "Kindly state in REVIEW that a misprint occurred in my article in the March number in reference to 'modes of firing.' The length of the prongs on the budding iron should have been $1\frac{1}{2}$ inches instead of $\frac{5}{16}$, as it would be impossible to fire with such short prongs without burning the skin by the necessarily hot plate."

INTERFERING OVERCOME BY RUBBER PADS.—John D. Fitzgerald, of Chicago, a successful horseshoer, writes to the *Horseshoers' Journal* that he has observed that all interfering horses, especially ankle and shin knockers, can be cured at once by the use of rubber pads. He says: "I have shod hundreds of carriage and business horses for interfering in front and behind, and I have found the rubber pad to stop them all, and I believe the rubber pad will stop all interfering in front and behind unless in exceptional cases of speed horses, when the weight of the pad will make the difference."

THE heavy harness horse lost a wonderfully successful champion when Charles F. (Fatty) Bates died in New York the 1st of March. He was possibly the most unique character in the country, and it will be a long time before his place will be filled. Of wealthy parents, who indulged his fondness for horses in early life, he became a professional driver and dealer, being in close touch with the swell set, and he did a great deal to popularize the high-stepping horse among the wealthy residents of Gotham, and he led them a merry pace, for his horses were the best, as were his carriages, harnesses and other appointments that could be obtained. He was only thirty-three years old at the time of his death, and weighed nearly 300 pounds, his demise being due to acute pneumonia.

EVERY STATE BOARD OF HEALTH SHOULD HAVE A VETERINARY DEPARTMENT.—The Minnesota Agricultural Society, at its recent meeting, passed resolutions indorsing the work of the Veterinary Department of the Minnesota State Board of Health (Dr. M. H. Reynolds, Director) as follows: "Whereas, our live stock interests are continually threatened with visitations of infectious diseases, and Whereas, we recognize the great importance of sanitation in connection with our live stock interests; therefore be it Resolved, that the State Agricultural Society recognize in this public way the great importance of the work already accomplished by the Veterinary Department

of the State Board of Health; and Resolved, that we approve of the present organization and methods of the State Board of Health for dealing with infectious diseases of domestic animals."

NEW YORK HERDS FILLING WITH TUBERCULOUS IMPORTATIONS.—The Genesee Valley Veterinary Medical Association at its January meeting adopted resolutions calling upon the New York Legislature to enact laws prohibiting the importation into the State of tuberculous cattle, claiming that the disease is rapidly increasing in Western New York, as such diseased animals, prohibited from being disposed of in adjoining States on account of stringent laws, are brought into New York in large quantities. There seems to be no question but that our cattle interests are suffering in consequence of this laxity in the State laws, and now that the Agricultural Department is about to supersede the figure-head Tuberculosis Commission, such agitation on the part of veterinary organizations is apt to strike a responsive chord, and some steps be taken to stay the progress of such contaminating influences.

A HIGH TRIBUTE.—The *Veterinary Journal* (London), which can see but little in America worthy of commendation from a veterinary standpoint, devotes more than a page to reviewing the report of the proceedings of the 1899 meeting of the American Veterinary Medical Association, and wonders why English veterinary societies have never published their minutes in book form. It condescends to admit that "by means of these proceedings we are enabled to form a fairly accurate conception of the tendency to scientific methods which is obtaining among American practitioners." It concludes: "We repeat, that in these proceedings we have the means of gauging the march of progress in America, and it is a pity that no British society provides us with a similar compilation." We can tell our esteemed contemporary that there are many things in the veterinary profession in this country which our cousins would do well to emulate.

HAPPY RESULT FROM OVARIOTOMY.—At the clinic of the American Veterinary Medical Association last September, Prof. W. L. Williams operated upon a thoroughbred filly supplied by Dr. William Sheppard, of Sheepshead Bay, he giving the history that she was possessed of great speed but absolutely refused to run, and was vicious, balky and intractable. The doctor performed the operation of ovariectomy through the vagina very cleverly, and we promised our readers that we would acquaint

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them of the result. In the New York *Morning Telegraph* of March 27 we find the summaries of the racing on the day previous at Little Rock, Ark., and in the third race, for three-year-olds, Cheesestraw II. came in fourth, beating four others, the distance being six furlongs, and the time 1.17. Dr. Sheppard writes that he will follow up her performances, and will again inform us as to her conduct. [Since the above was in type Dr. Sheppard sends another copy of the same paper, giving the result of the races of March 29, and in the third race we find that Cheesestraw II. won, beating five horses, finishing under the whip in the same time as the previous performance.]

CÆSARIAN SECTION.—Mr. James Laithwood, M. R. C. V. S., in the *Jour. Comp. Pathol. and Therapeutics*, records the case of a half-bred Russian poodle which was in a state of collapse from dystokia, having been in labor all of the previous day. Only the ribs of a pup could be felt by vaginal examination. Cæsarian section was decided upon. The hair was shaved from the flank, the skin disinfected, and an incision made through the skin in an oblique direction towards the hip, the muscular fibres being separated, and the uterus withdrawn. It being incised, five pups were removed, four of which were alive, the fifth being dead and twice the normal size, the sole cause of the mischief. The wound was sutured with carbolized catgut and a bandage applied over it. The bitch recovered.

MAKING AN ARTIFICIAL PREPUTIAL OPENING.—Mr. B. Godfray, M. R. C. V. S., in *The Veterinarian*, describes the case of a twelve-months-old fox terrier dog, which had a congenital deformity of the prepuce, there existing but a small hole in the prepuce, through which urine escaped in drops. After injecting 10 minims of a 10% solution of cocaine, a longitudinal incision was made in the median line, guided by a grooved director, extending half an inch. Two other incisions were then made at obtuse angles to the first, cut in the form of a Y. The tissue between the forks of the Y were removed and the penis brought into view. It was then easily protruded, and the edges of the wound kept apart, recovery being complete.

VETERINARY AMBULANCE CORPS IN FUTURE WARS.—The British Humane Society, London, has suggested to the War Department to provide for a Veterinary Ambulance Corps in South Africa, in order to remove promptly horses which are severely wounded and shoot those beyond hope of recovery. The War Department in reply has stated that such an ambulance corps would not come under the rules of the Geneva Con-

vention, and that, therefore, for the proper protection of such corps international agreements should first be reached. *The Veterinary Record* enlarges on this question, citing also the case of Veterinary Lieutenant Shore, who was taken a prisoner by the Boers against his remonstrations as being a veterinary surgeon and a noncombatant. We thus see that the English army veterinarian, otherwise properly recognized, still occupies an anomalous position in war. No doubt, the case of Lieutenant Shore will be taken up by veterinarians of other armies and brought before the next International Veterinary Congress for consideration and action.—(O. S.)

THE CONTROL OF TUBERCULOSIS IN NEW YORK STATE.—Chairman Daniel P. Witter, of the special committee of the New York Assembly appointed to take testimony and report on the question of the control of tuberculosis, has made the following recommendations for a bill: (1) That the present tuberculosis committee be abolished and that the work of the protection of the herds of this State from the infection of tuberculosis and the examination and destruction of glandered horses be placed with the Commissioner of Agriculture. (2) That the Commissioner of Agriculture will appoint a farmer well acquainted with the value of cattle, who shall be known as the State appraiser of condemned cattle, whose duty it shall be to accompany and assist the veterinarian in making examinations of suspected herds and appraise those condemned. (3) That the State can only force the condemnation, quarantine and slaughter of such animals as are found to have tuberculosis by physical examination. But if a dairyman elects to have his herd treated with tuberculin, and will enter into an agreement with the State before such examination shall be made, that he will disinfect his premises, and either slaughter or hold in strict quarantine all of the reacting animals and their products, that the State will assist him in his efforts to entirely rid his herd of the disease. (4) That the appraisal of condemned animals shall be made at the time or immediately following the examination. (5) That the State shall pay the owner of all cattle slaughtered, under the provisions of this act, known to have been owned in this State at least one year, one-half of the appraised value for all cattle found to have tuberculosis, and full appraised value for all cattle found to be non-tuberculous upon post-mortem examination. (6) The owner of condemned cattle shall be paid by the State Treasurer out of any money appropriated for that purpose, the amount of the certificate for indemnity as approved

by the State Appraiser, the Commissioner of Agriculture and the State Controller. (7) That no cattle shall be examined and condemned under this act after the money appropriated for the indemnifying of owners of such cattle shall have been exhausted, until another appropriation shall have been made.

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—Allow me to compliment you for having the moral courage to take this course, as it is the only business like manner to run a subscription list.—*Wm. R. Howe, V. S., New York City.*

—Enclosed please find \$3 for the REVIEW for another year; must have it; cannot afford to be without it. Wishing the REVIEW a long and prosperous life, I am as ever.—*A. D. Galbraith, D. V. S., Greensburg, Indiana.*

—Although I have been out of the profession for six years, I enclose my subscription, as I like to know all that is going on in the veterinary world.—*E. H. Humphrey, Agent U. S. Ex. Co., Cortland, N. Y.*

—All I ask is that you let me know if you find my account out of balance on your books. I look longingly for my REVIEW after the first of each month, and would be lost without it.—*T. S. Childs, V. S., Saratoga Springs, N. Y.*

—I am in full sympathy with the position you have taken in the March editorial in regard to delinquents. Make them pay or cut off their supply. What is the use of carrying such people?—*Wm. Herbert Lowe, D. V. S., Paterson, N. J.*

—Enclosed find check for \$3 to renew my subscription for the REVIEW, a paper that I could not think of having stopped. I think you have taken a very wise course in placing the journal on a cash basis. I trust you will lose no subscriptions, but if you do lose a few it will leave you with a good substantial list of true lovers of the profession. . . .—*J. H. Conover, D. V. S., Flemington, N. J.*

—I very cheerfully enclose my check for \$3 in payment for the REVIEW from April, 1900, to April, 1901, and thank you for publishing so good a paper for so little money. The records will show that I have been a subscriber for many years, so I am in a position to say that the REVIEW gets better as the years go by and the March number of 1900 is the brightest jewel of them all.—*Dr. A. W. Axford, Naughtright, N. J.*

—Enclosed please find my check for three (\$3) dollars, being my subscription for the REVIEW for the ensuing volume. While I am not in arrears, I confess I have not always paid so early, but I am at this time prompted to do so largely to show my appreciation of the REVIEW in general, but at this time stimulated by the interesting ten cases of azoturia so successfully treated with potassium iodide by Dr. Childs, of Saratoga, and reported in this month's REVIEW. Of course, I do not say that the doctor has made any mistake in his diagnosis, but it will be conceded that his successful treatment of ten cases in succession beats all records, and there may be some readers of the REVIEW sceptical enough to infer that had even one died out of the ten and the convalescence of some of the rest a little more protracted their doubts might be removed. The pathology of this disease being rather obscure, can it be that there is a mild form for the country and a malignant type for the city? What say you?—
L. McLean, M. R. C. V. S., Brooklyn, N. Y.

ALEX. EGGER, 34 East Van Buren St., Chicago, Ill.,

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The widow of the late Dr. Wm. H. Harbaugh, of Richmond, Va., wishes to dispose of his ambulance, which he had specially built and used but a short time before his death, it being now practically as good as new. Any one wishing such a desirable addition to his hospital will do well to address MRS. SALLIE I. HARBAUGH, Fairmount, Richmond, Va.

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NOVEMBER, 1894, REVIEW WANTED.

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